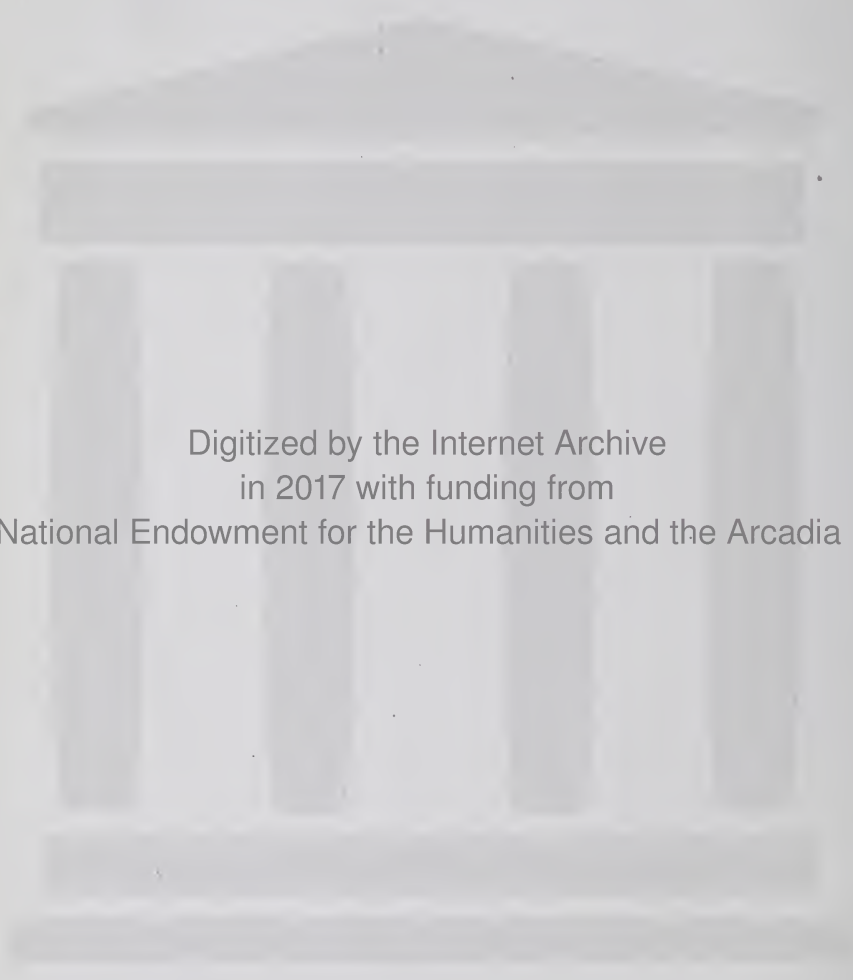
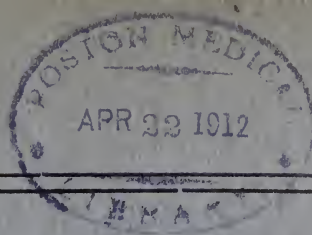


BOSTON
MEDICAL LIBRARY
8 THE FENWAY



Digitized by the Internet Archive
in 2017 with funding from
The National Endowment for the Humanities and the Arcadia Fund



New Mexico Medical Journal

October 1911

VOLUME VII.

NUMBER 1

It is the differences in the proteids which constitute the chief difficulty in the substitution of cows' milk for mothers' milk.

The mere quantitative adjustment of proteids and other constituents does not afford a food which has the physical, chemical and physiological properties of human milk. And it is these *qualitative differences* to which all the methods of infant feeding and all the "foods" have been empirically and scientifically (even instinctively) directed.

One method, the Peptogenic Milk Powder and process, proposes to solve the problem by utilizing a physiological principle (the proteolytic enzyme) to convert the proteids to the *definite point* where they correspond with the native proteids of mothers' milk in solubility, minute coagulability and consequent digestibility. At this point the enzyme is destroyed, eliminated, by heating the food to boiling point, or to only 160-165 deg. F.

This physiological conversion of the proteids makes it possible to obtain, in milk prepared with Peptogenic Milk Powder, not only an accurate "percentage" approximation to mothers' milk, but a food peculiarly adapted to the functions of the human infant.

FAIRCHILD BROS. & FOSTER
NEW YORK

14704

BOSTON MEDICAL

OCT 30 1916

The New Mexico Medical Journal

Volum VII

OCTOBER 1911
CATALOGUED

No. 1

E · D · I · T · O · R · I · A · L

OCT 30 1916

G. C.

MEDICAL LEGISLATION

Below we publish editorials from the pens of several of the men in the profession in New Mexico who have fought the quack in "these diggings" for many years.

They all emphasize the fact that the medical legislation in New Mexico is sadly in need of revision and that this is the time to obtain the needed changes. With a united profession demanding only that which is just and right there should be no difficulty in having the needed laws placed upon the statute books.

Let us all get together on this subject and work for the common good.

Every well informed person in New Mexico knows that our present medical law is a board of registration of diplomas. New Mexico is the dumping ground for all the quacks, incompetents and medical fakirs of all the other states, the only state in the union in which applicants for license to practice medicine are not required to pass an examination as to their qualifications.

Our legislature will convene in January 1912, the members of which are to be elected on November 7th, next. The New Mexico Medical Society has endorsed a splendid Medical Practice Act, one that not only every physician but every citizen who has the health and lives of the people of the state at heart should give

his ardent and sincere support. This bill, if enacted into a law will, at the beginning of Statehood, place New Mexico up-to-date and on an equality with the other states in the matter of providing the best medical service to be had for our people. Especially should every physician in New Mexico familiarize himself with this bill and make it a point to bring all the influence possible to bear upon his representatives in the First State Legislature to support it as it will be presented, without any change whatever. The bill is fair and will not affect the standing of any one now practicing legally in the State on a license under any former law. Let the profession "get busy."

YATER

The great territory of New Mexico is about to become a state. The importance of this step in the family of states is the same as in an individual household where a child has reached his majority.

For many years we have been growing. Growing under the care and tutorage of the federal government, which has directed our acts and guarded our welfare.

Now we are free. Free to direct our acts and deeds; to govern our course in life. It lies now in our power to become a favored daughter in the family of states, or a prodigal black sheep whom none will be proud to claim as kindred.

Now that we are free, amongst our first acts as free people must be the formu-

lation of rules and laws which will govern our growth and progress. Upon the wisdom of the laws that are to govern our acts depends our development. Upon these laws depends how brightly we shall shine amongst the crown jewels of one of the greatest nations on the globe.

We need a new law to govern the admission of medical men who are to protect the coming immigrants and the native born, from the ravages of disease.

We want a law that will admit with open arms every competent, honest doctor. We of the legitimate profession are not afraid of honest, competent competition. What we are mortally afraid of is the unprincipled, uneducated, incompetent charlatan, who does not seek to care for the sick, but "Goeth about as a roaring lion seeking whom he may devour." 'Tis he who robs us of our good name. Our laws should neither interfere with the coming of the young nor the old. New blood is desirable, and aged council is good. What we do want is an impenetrable fence against the wolf in sheep's clothing, that comes prowling about the fold seeking a means of entrance. This monster no sooner passes the portal than he throws off the dead skin covering and attacks the weak and suffering who cannot see beneath the modern dress the wolfish heart nor the dastard fangs that drip with the blood of his unwary victims.

To be sure his sins will find him out, and sooner or later he will reach the end of his trail in oblivion; but the path he has trodden will be lined with desolate homes and blackened firesides. "And the mourners will go about the streets" whether it be ignorance, quackery or mania from drugs that bends their heads in grief.

We would like to place the medical

profession of the new state upon a pure white, marble pedestal and maintain it there a flawless gem which all will honor and admire. First we must cleanse the scales of ignorance from the eyes of the statue and remove from it the distorting influence of quackery, viciousness, and mania. Assistance from the people, in this laudible work is all we ask.

If the honest medical profession does not want to be relegated to the new state dumping ground, they must refuse to go to the garbage can of society along with other junk, the stench of whose rotteness is a blot upon the community and a galling yoke on the necks of honorable men of the profession.

The New Mexico Medical Society has agreed to appoint one man in each county recommended by the profession in that county to constitute a legislative board for the purpose of drawing up and assisting in the passage of a new medical practice act for the new state of New Mexico.

This matter is of great importance. Every member so named should meet on the first day of the first legislative assembly of the new state, in the city of Santa Fe and agree upon a medical practice act, that will protect the honor of the profession, and that will protect the physical welfare of all the people who depend upon us for care and attention in time of their direst need.

The profession in each county so appointing their delegate should do his professional work during his absence and turn over the proceeds to him on his return. They should explain to his patrons, so treated, that their doctor was away on a noble mission, the sole object of which was to protect their lives and health.

Such a law can and should be passed and all the people should know why it is necessary.

Under our present law the wolves are snapping and snarling at our doors, some are slipping into the fold, notwithstanding we have gate keepers always on watch. We want to keep them out. We must keep them out if we are true to our Aesculapian oath "To use our every effort in the protection and care of those we serve."

SWOPE.

The question of what is needed in medical legislation is becoming a vital one in this state. We have, within the last twenty-five years, tried all forms, shapes, kinds, and varieties of medical laws and, we regretfully say, without avail.

It might possibly not be out of the way to state that in our belief, the ultimate goal of all legislation of this kind should be of a national character, that is, that a physician to be licensed should prove that he is competent to be entrusted with the lives of the community and that license should be valid, all over the nation, thereby following the example of other countries. This, however involves too many political lines, such as the nationalization of medical colleges and while I firmly believe that we are drifting fast towards such a condition it is not at present practicable.

In reviewing the different laws that have been enacted since the year 1882, I personally have come to the opinion that the absolute ignoring of the college and the enforcement of compulsory examination is at present the only proper method to pursue. Not only has this been adopted by the majority of the States, thereby making such localities as have looser laws a dumping ground of the incapables, but it is to my mind an onward step towards the ultimate enforcement of the national license.

I would eliminate the consideration of

any college on account of the difficulty in drawing the line between the good, bad and indifferent, and the only way to ascertain the qualifications of the candidate to practice is by regular examination in the hands of legitimate and impartial men. Even with this there will still be a drawback of the personal element of the examining board, and the future location of the candidate might, as it has in the past, make a marked difference in the rating, nor would I consider in this board the question of schools of medicine. I would have them represented in their peculiarities but would also have a license issued not by their specific portion of the board but by the entire board at large.

The main question of the examination being to bring out the knowledge of the individual on general and not on specific lines.

The question of revoking a license should also be considered but I would put it on different grounds than those of the code of ethics, the principles of which are every day violated by men already licensed and who thereby claim greater consideration. Moral and legal aberration should be punished in some way, altho I doubt if the same can be intelligently or properly handled.

WROTH.

"606"

With a record of more than 100,000 successful cases, giving in many instances the most remarkable results, every practitioner in New Mexico should acquire the necessary knowledge for the administration of salvarsan and use it in all cases that fail to respond quickly to the older forms of treatment.

The report of fatal cases, and many complications, charged to the use of this drug have doubtless deterred many of us from realizing, by actual clinical trial,

its remarkable value in promptly clearing up all forms of syphilitic lesions, more especially the chronic dermatoses that are difficult to influence by mercury and the iodides.

Death following the use of "606" has, in all probability, been due to faulty administration, as in the use of boiled water in place of the recommended double distilled water in making the salvarsan solution for injection; also the use of too little or too much sodium hydroxide and an admixture of organic and inorganic matter through careless technic.

The preparation of any drug, to be used intramuscularly or intravenously, requires the greatest care on the part of the operator and sad experiences await those violating the laws of strict asepsis in this connection.

Some of our more conservative authorities, while admitting the great therapeutic value of "606," are inclined to withhold opinion as to its absolute specific action, and freedom from harm, until this remedy has endured the test of time.

Should we not follow their lead and not promise our clientele too much, thus being prepared for relapses at some future date after several injections and a long series of negative Wassermanns?

Many "specifics" have come and gone and the future may prove salvarsan to be of this class, but this fact, if a fact it prove to be, should not cause us to hesitate in its use, as it is a valuable remedy and is with us to stay and accomplish a great amount of good.—INGALS.

TUBERCULOSIS NUMBER

The December issue of this Journal will be devoted entirely to tuberculosis and will be under the editorial management of the New Mexico Society for the Treatment and Prevention of Tuberculosis. A particularly interesting and instructive set of papers will be published and will include among others, papers by Gerald Webb, and J. F. McConnell of Colorado Springs, R. B. Homan of El Paso, Texas, J. W. Colbert of Albuquerque, G. W. Bushnell, Col. Med. Corps, U. S. A., Fort Bayard, N. M., F. T. B. Fest, East Las Vegas, N. M., L. S. Peters, Silver City, N. M.

Special editorials are being prepared for this edition and it is intended by those in charge to make it an edition worth remembering and keeping. For special advertising rates and other particulars address the Editor, Las Cruces, New Mexico, or Dr. L. S. Peters, Silver City, New Mexico.

LUNA COUNTY NOTES

Luna County Medical Society met in the office of Dr. I. B. Keller, October 3, 1911. Present Drs. Steed, Swope, Montinyohl, Keller and Carter. Minutes last meeting read and approved. Communication from President Bradley asking that a member of local society be recommended for appointment on legislative committee. The Luna County Medical Society acting upon the request of Dr. Bradley recom-

mended Dr. S. D. Swope of Deming, for the appointment.

The application of Dr. George D. Carter was read, on motion the rules were suspended and Dr. Carter was duly elected to membership of the Luna County Medical Society.

There being no further business the society proceeded with the regular lesson of the post graduate course.

Mastoid Surgery

E. H. Irvin, M. D. El Paso, Texas.

Read by Title before the 30th Annual Session of the New Mexico Medical Society

Las Vegas, N. M., Sept. 6-9, 1911.

There is no adequate classification of the different forms of Suppurative Middle Ear diseases obtainable in any one place in the literature. The extreme rapidity of the development of Otology in the past few years is probably the reason for this.

With so many writing, who have never written before, modern Pathology has been confused with time honored, but inappropriate terms formulated years ago, and which we retain because we have not had time to replace them by suitable and definite expressions.

The result is that if one does any Mastoid Surgery he must make for himself a working outline, largely the result of his own experience and observation.

That there is much more Mastoid disease in the Southwest in proportion to the population than there is in the Eastern and Seaboard States, I have been for some time convinced.

This I make as a statement which I can support with reasons, but not statistics.

It is hoped that the many healthy and growing medical societies of this section of the country will in the next few years be able to publish and put on record enough of our own work, to enable us to speak definitely in regard to the prevalence of diseases in the Southwest.

I believe we have more than the ordinary amount of Mastoid cases. First, on account of the greater prevalence of tuberculosis; next catarrhal troubles brought on by heat, dust and the greater variation in temperature from day to night.

That altitude has any bearing on this matter I have not been able to determine.

The classification of the forms of suppurative Otitis Media adopted by almost all modern text books is arrived at by combining the clinical picture with pathological findings.

This is faulty and misleading for at different periods of the disease the clinical picture varies and often simulates another and entirely distinct form of the trouble, many symptoms being common to different lesions.

For a reasonable accuracy and a definite point from which to make a classification of cases of Otitis Media Suppurativa and their best co-related diseases, I find the plan given by Kopetzky the best and most easily carried out.

This plan however, embraces all middle ear diseases, and I have adopted his central idea and changed the detail and nomenclature to fit my needs.

"A classification of diseases affecting one organ, to be practical must group the diseases having common factors to-

gether." "A critical study demands that this requirement be met by taking account of the etiologic factors of the lesions involving the ear." K.

Finally "the classification must be logical, it must show at a glance the inter-relationship, the sequence of development, and the usual terminations of the conditions thus classified." K. A classifica-

Suppurative

Otitis

Media

Etiology

tion based upon actual lesions presented, meets all the essentials enumerated.

The pathologic lesion is constant for the given condition and itself suggests the medical or surgical Therapeutic measures. The grouping which I give here has met my requirements, and enables me to more readily establish in my own mind the probable outcome of the case.

- (1) Acute Progressive
Complicated with Mastoiditis
Uncomplicated with Mastoiditis
- (2) Chronic Progressive, with or without Mastoid infection.
Both 1 and 2 having bone and mucous membrane involvement.
- (3) Acute Subsiding (no evidence of bone involvement).
- (4) Chronic latent with bone involvement
Recurrent attacks.

It is not necessary here to go into the bacteriological findings in Suppurative middle ear disease. "There is no specific organism of Otitis Media and moreover, this disease is not mono microbio." B.

Usually there is present one exciting germ which is associated with several others all of which may have a bearing on the outcome of the case.

There may be some instances in which the patient entirely recovers from an acute suppurative middle ear trouble, at least an apparently recovery may take place. As to an infected mastoid ever becoming free from infection, without operation, I am extremely doubtful. We are frequently forced to allow mastoiditis to "subside and get well" for reasons beyond our control, but it is only a state of quiescence that deceives us and the source of future trouble is still there, latent, but a most potent nidus for recurrence. I have operated at subsequent times on cases of this character.

Ballenger reports a case in which relighting of this mastoiditis occurred seven years after the first attack and with a fatal termination. In this instance scarlet fever had been the original exciting cause.

Once that the fact is established that there is present a mastoid infection I believe that an operation should be done just as soon as compatible with the patient's general condition. The choice of operative method is not hard for there are two distinct and well defined mastoid operations. The complete operation, which does everything except invade the middle ear, and the radical operation, which enters the mastoid and removes the ossicles, converting the antrum and tympanic cavity into one space.

For all acute conditions the complete operation is usually sufficient. For chronic cases the Heath and Meato-Mastoid have been advocated as an improvement over the radical operation.

It is urged in favor of these two meth-

ods that hearing is preserved in a greater degree. While this is true in most cases, it is a negative gain, as many patients operated on by the Heath method come again to the operating table. The retention of necrosed ossicles within the tympanic cavity keeps up a discharge and the patient is apparently no better than before.

Not all recover even with radical work which stops only at the point at which the operator believes he has removed all diseased parts.

Much less likely is there then to be a cure with what is, on its face an incomplete treatment of the matter.

The failures to cure after the radical operation are fewer and may be accounted for by the following reasons: FIRST: Tubercular and syphilitic mastoids of which a considerable percentage do not get well with the most thorough operation and after treatment. A number of failures may be justly attributed to incomplete operations due either to faulty technique, or to a fear of wounding the facial nerve.

Still more cases fail to recover from the fact that after treatment is not thoroughly carried out.

The operator should himself attend to the after treatment of his mastoid cases if he wishes to secure a maximum of cures.

Every one makes failures, but his competitors know more about them than he does himself, as patients who are not cured by operation go to some one else the next time the ear troubles them.

Another most potent cause for failure is, in not widening the canal enough, and in leaving too small a route of access to the operated parts where after treatment is needed.

Finally (Barnhill) cases sometimes occur which do not get entirely well

even though every recognized principle in modern surgery has been followed and the most careful and competent after treatment be given, and this too in individuals who are apparently free from constitutional disorder of any kind.

It is not easy in such cases as this to assign a definite cause of failure.

After following the Heath operation since its introduction in this country four or five years ago, when I first saw it done by S. MacCuen Smith, and after having tried it thoroughly in my own practice, I can say that it does not impress me as being of any special advantage.

One reason suffices for me in regard to this operation—the fact that all cases in which you select the Heath Method have some Ossicle, bone involment and the malleus and the incus really ought to be removed.

It seems illogical to operate and leave behind some of the affected parts.

The nightmare of the otologist—facial paralysis, is preferable to leaving a patient in an uncured condition.

Summarizing therefore, two operative procedures are left—the complete and radical operations.

For acute cases the complete removal of all diseased material leaving the tympanic cavity intact and for chronic cases the classical tympano-mastoid.

The following cases which I wish to report have been selected from my records, from the fact that they possess characteristics varying from the every day mastoid.

Up to the present time there have been reported ninety-five cases of abducens paralysis occurring in suppurative middle ear trouble.

In those instances in which I have been able to get full history, for example the series of six cases reported by Chas. E. Perkins, "Annals Otology September,

1910"—one symptom was noticeably conspicuous in all instances and that was intense headache on the affected side. Ordinarily headache is not noticeably a frequent symptom in mastoiditis, and I attribute its constant appearance in this disease when complicated with paralysis of the external rectus to the diplopia and tiring of the extrinsic muscles.

This case J. W. D., age thirty, R. R. office work, occurred in the practice of J. B. Gray, and as I saw it in consultation and also was present at the operation am able to report fully.

The patient first appeared with acute otitis media and showed a spontaneous perforation of the drum. The pain did not decrease and in fact was intense. No typical symptoms of mastoiditis appeared and temperature was seldom more than half a degree above normal. At the end of fourteen days the patient reported that he saw double on looking to the right. Upon examination he was found to have a paresis of the external rectus of the right eye. He was sent to the hospital and operated upon next day. A sub-periosteal abscess was found well back and toward the antrum and apparently in a large aberrant cell. There was a drop or two of pus in the antrum and the rest of the mastoid clear and apparently healthy. The abducens paralysis was better on the day following the operation and the headache less. This case occupied six weeks recovering and during the time ran an occasional temperature as high as 99.6. At the end of this time however, the paralysis of the external rectus had entirely disappeared and in all other ways the man seemed well. This case occurred a year ago and at the present time and during all time intervening he has been entirely well and is back at work.

Of isolated paralysis of the extra-

ocular muscles, that of the external rectus is most frequent, forming more than one-third of all such cases. This is partly due to the fact that the sixth nerve supplies no other muscle, and also to the anatomical relations of this nerve. The rather rare occurrence of paralysis of the abducens, or sixth nerve, in Acute Suppurative, Otitis Media was thought of sufficient interest to make these notes of the case a given above. Koellner of Berlin in a report of 257 cases of paralysis of the external rectus, isolated in 107 and associated with paralysis of other muscles in 154, found it due to ear disease in two cases.

From what I have since learned this particular form of paralysis accompanying Acute Otitis is more apt to occur in children between the ages of five and fifteen years. At least one-third will occur between these ages, and only a single case under five years has been reported, with several cases in older people. It becomes rare after forty years. Of sixty-seven reported cases of Otitis origin collected by Baldenweck, eleven terminated fatally, and of eight chronic cases, one ended in death. As to the cause of this singular condition, I find that the authorities are greatly at variance in their opinions on this subject. The text books mostly evade the subject or mention the possibility of such a condition arising, only to drop the subject without comment, or imparting any information why or how these should arise only occasionally, when acute Otitis Media is so common. Some claim that the cause of paralysis is a necrosis at the apex of the Petrous Portion of the Temporal Bone, some say reflex in origin, some, toxic absorption of pus, etc., while others think it arises (Fox) or is coincident with the Otitis rather than caused by it. It is more than

probable, according to my judgment, that there may be a circumscribed area of meningeal inflammation that does not suppurate, producing pressure, pain and paralysis of the sixth nerve. If it was due to necrosis so deeply seated as the apex of the Petrous Portion of the Temporal Bone I think the mortality would be greater and few recover completely the use of the muscle. I believe the treatment is both surgical and medicinal. Surgical to the extent of doing the ordinary mastoid operation, except in such cases as one might find more necrosis than was found in this case. Medicinal in treating a low grade meningitis.

Three cases of spontaneous facial paralysis occurring in my own practice. (Operation with recovery).

Facial paralysis quite frequently occurs before operation and just as often in chronic latent cases as in the acute progressive form.

Three typical cases examples here presented are pre-operative paralyses occurring in a tubercular subject, a chronic latent mastoid and an acute fulminant condition:

CASE A. William M., aged 11. Family history—father died of tuberculosis, mother and sisters all enjoying good health. At three years of age patient had a severe attack of earache, which subsided leaving a discharging ear. Within a year the mastoid became tender and from that time on the child had frequent recurrent attacks of pain and tenderness. The discharge was of a most offensive odor, in fact much worse than anything of the kind which I have ever encountered. At nine years of age a large pus sack formed behind the ear and it was lanced but no attempt to enter the mastoid was made. Six months ago the patient was referred to me and I advised

immediate operation. There was left facial paralysis and a large post auricular abscess—the amount of pus coming from the ear canal was excessive and malodorous. Patient was thin, pallid and in a state of dejection. A Stacke-Schwartz operation was done and with ease, as the long suppurative process had done much of the work for me. I decided to leave a large mastoid opening and after six months there is at last no discharge and the wound about closed. Hearing is diminished, but the paralysis has disappeared, and the boy has gained twelve pounds in weight and appears well.

Seventh nerve involment probably due to inflammation brought on by absorption of toxic products present in the antrum and tympanic cavity.

CASE B. Henry J.-of this city, age thirty. Family history negative in every way, patient strong and healthy with the exception of an intermittent ear discharge, which had started fifteen years prior to the first time he consulted me. These recurrent attacks averaged about two a year, and were ushered in by a severe earache followed by some tenderness around the auricle, but not over the mastoid. Within a day or two a profuse discharge from the external auditory canal would bring relief, and after running for a few weeks the ear again became dry. The occasion of the man calling on me was that in the last attack he had, January, 1910, his face became paralyzed together with ptosis of the left eyelid, which frightened him considerably. I did a radical operation, going through the hardest bone I have ever seen. The mastoid cells were practically absent, although the antrum was normal in dimensions. In this instance I closed the incision and treated it through a well widened auditory canal. Patient was back to work (he is a city salesman)

in six days and made a complete recovery. Facial paralysis has entirely disappeared.

CASE C. O. J. W.—acute mastoiditis (Progressive.)

Date of onset December 20, 1910. The patient, a very busy man, returned from a long drive with an acute pain in the left ear. This was accompanied with some soreness in the Pharynx and tenderness over the Eustachian tube. Within twenty-four hour the drum was bulging and was opened by a free incision. The discharge was profuse, but brought no relief from pain. At the expiration of forty-eight hours from the inception of the trouble, a distinct mastoiditis made its appearance, and temperature went as high as a hundred and four. During the first day the temperature had not exceeded one hundred and two. The patient became delirious at times and he was sent to El Paso for consultation. I placed him in the hospital and found typical signs of mastoid suppurative. The posterior canal wall was bulging in the superior portion and pain was severe. I advised immediate operation, which was declined, further time being asked for by the patient, who was hoping for a subsidence, and who wished to avoid operation, if possible. This was in the morning. At four o'clock in the afternoon I was sent for and arrived to find a pronounced facial paralysis. Equilibrium was disturbed, the patient being unable to walk even a few steps without pitching to the left, and would have fallen without support; he was also nauseated and the left eyelid drooped slightly. As soon as possible to prepare him, he was taken to the operating room, and I did a complete mastoid, not deeming it unnecessary to remove the Ossicles. The mastoid process was full of pus to the tip, and the pressure in the

middle ear must have been considerable, as the tube and external auditory canal were inadequate to the task of drainage, so fast was pus production going on. To the sepsis and pressure I attributed the labyrinthine irritation and the facial paralysis. The man has entirely recovered with the exception that hearing is much reduced on the operated side.

Menigitis, following a mastoid operation is happily, not a very frequent occurrence.

The most careful technique may leave an aberrant cell, which subsequently will produce a re-infection, and sometimes bring on a meningitis. Especially is this true if there is an open route to the dura, or if there has been any incomplete exposure of this membrane. In my own experience there is no certain time at which this meningitis may occur, although the danger is less after forty-eight hours have passed from time of operation. There have been cases however, which have made their appearance even months after operation, evidently a relighting from a cell, which has been overlooked. Now there is a condition which seems innocent enough at first sight, and from which a good prognosis is only too likely to be made. This is the kind of cases seen in children, who have had an ear which has discharged for several years, and in whom there have been recurrent attacks of acute inflammation. They have always had mastoiditis, which has subsided and "cured itself," but finally has broken through cortex and skin, and left a permanent discharging, post-auricular sinus. This sinus often extends to the dura and there is frequently at its apex a circumscribed, well walled off, epidural abscess. In operating on this kind of case, one can hardly be too gentle in his manipulation, or too extensive in his removal of bony tissue.

Everything which is even suspected of harboring any points of infection should be taken away. The dura should be thoroughly exposed and careful drainage established. Even with conscientious work it is not unusual for meningeal inflammation to manifest itself within forty-eight hours. Heroic measures can be resorted to, but are nearly always unavailing and death follows in a few days.

Frequency of facial paralysis following the radical operation.

Almost every one who has done any radical work or much operative treatment of chronic middle ear trouble has had the sad experience of leaving an occasional case with a facial paralysis.

While this is theoretically avoidable, practically there are instances in which you cannot help yourself. I remember a now famous operator living in one of the Southern States telling of his early experiences. A very important woman of his town came under his care for an ear trouble upon which he operated, leaving her with a paralyzed face. This occurred fifteen years ago, and this lady was then middle aged. She is still living and enjoying good health, but with no improvement in regard to her face. The man who operated on her says that he has not failed to meet her on the street every morning since then on his way to his office, and that he is sure that she spends the rest of the day driving up and down in her carriage telling every one she meets all about it. Facial paralysis is a bad advertisement for the operator. But better that than an incomplete operation, as the physician's first duty to his patient is to cure the disease, even if in so doing he destroys the nerve. You will gather from the foregoing that I do not deny that I ever had such an occurrence in my own practice.

Mastoid abscesses do not always stop with such complications as sinus thrombosis, jugular vein infection or even epidural abscesses. Permit me to detail a case for which I am indebted to the courtesy of Dr. Hugh Crouse. This dates back five years. This man, aged thirty-five, was not originally seen by Dr. Crouse, but was operated on in a neighboring state for mastoid suppuration—a trephine being used, an opening made and nothing further done. The patient had originally been badly affected with nasal polypoids. The inference would be that some infection had traveled up the tube and infected the middle ear, and subsequently the mastoid.

Dr. Crouse first saw the patient about one year after the trephine operation had been done. The condition was indescribable. The mastoid was practically disintegrated, the sinus plugged shut, a radical operation was done, the sinus opened and freed from its infected clot and the man started to make a good recovery. In fact at the end of ten days he was physically well able to be up and about, but was warned against doing so by his physician. Being in hospital he had no need to wait upon himself. One day he got up from his bed and walked across the room to get a drink of water; he had no more than done so before he fell to the floor and in a short time was dead. Autopsy showed that he died from an embolus. It showed also that the pus had traveled backward and upward between the trapezius and complexus muscles, and perforating the skull a little to one side of the foramen magnum and produced a large cerebellar abscess.

This case is essentially different from any others, which I have found in literature. It is different in one important point, namely, the total absence of

any symptoms remaining after the mastoid operation, except disturbances of equilibrium which would indicate that there might be trouble elsewhere. It is certain that the man would sooner or later have developed something which would have pointed to cerebellar abscesses. The fact remains that up to the time of his death he had shown nothing to indicate than any such thing existed. Two cases of cerebellar abscess with thrombosis of the lateral sinus reported by D. S. Dougherty, in the *Annals of Otology, Rhinology, Laryngology*, of June, 1910, are typical in every respect. (One of which I quote here). After the usual mastoid operation had been done and the clot removed from the sinus the patient became very restless and complained of chilly feeling and headache, temperature approached a hundred and two, and pulse was irregular. At this time it was decided to resect the internal jugular, which was done. Within forty-eight hours the patient became very drowsy, screaming on awakening and immediately falling into a stupor. Continually picked at face and body. An exploratory operation for the presence of cerebellar abscess was decided upon. This was done, the pus located and the usual operation followed. The patient made a good recovery.

The Whiting extension of the first incision is very useful and in fact necessary in one condition—namely extensive necrosis of the soft tissues.

The following two cases which occurred in my practice in a short time ago illustrate this fact very well.

The first patient, Edith C., age seven has the following history. Resides near Central Arizona. Her ear trouble commenced with an attack of follicular tonsillitis, followed by pain in the ear, and in a few days the rupture of drum and evacuation of an abscess. Ear continued to

run and mastoid became tender.

The child was not brought to El Paso, however, until a soft swelling appeared behind the ear. Upon first examination I found her temperature 97.2 and pulse one hundred and forty. Gave an unfavorable prognosis. Pus had filtered back under the scalp to the occiput and the abscess was as large as half an orange. Operated as soon as preparation could be made. Did a complete mastoid, using the Whiting long backward incision and removed a handful of necrotic tissue. Pus pulsed from the depths of the incision. Exposed the dura unintentionally, and as pus continued to flow, decided that I had circumscribed epidural abscess and enlarged the opening to the dura. The child made a good recovery.

The second case of this kind was a woman of twenty-three. Living a distance from the railroad, she went along to apparently a serious condition. There was a large abscess under the soft tissue back of the ear and she had some temperature. I did a radical operation and found a few old granulations in the attic and a drop of pus in the antrum, but altogether a very small amount of tissue destruction to what I expected from external appearances. Patient made an uneventful recovery.

The Whiting extension of the incision is called for in such cases, but is not ordinarily necessary.

SEQUESTRATION OF THE MASTOID CELLS

This case occurred in a boy aged four who had recovered from scarlet fever three or four weeks previously. Both ears had been discharging profusely since the second week of the fever, but he had had no mastoid symptoms until two weeks later. The ears were tender, and

the left mastoid was unquestionably involved. I was called in consultation, but could not get consent to operation. Finally I left the case telling the parents that there was nothing for me to do under the circumstances. Four days later I was re-called and found the boy had a temperature of a hundred and three and was flighty. At times he was nervous and wide awake, and then again was very drowsy. At no time did he seem conscious of his surroundings. Operation was consented to and I accepted it with reluctance, as the prognosis seemed bad to me. After exposing the mastoid I made one stroke on the gouge and it seemed to me that the entire side of the skull came loose. For a few seconds I was half convinced that I had separated the entire mastoid process. Taking hold of the upper part of the posterior bony canal wall with a pair of forceps, I rocked it gently to and fro and soon was able to lift out the entire contents of the mastoid, cells and all in one piece. This is the most complete instance of sequestration I have encountered. There were no other points of interest and the child made a good recovery.

TECHNIQUE

Seven or eight years ago the number of instruments which I included in my mastoid outfit was about seventy. At the present time excluding a few artery forceps the number is near seventeen. I use a small London knife for the first incision which is carried from the tip of the mastoid process around and well above the insertion of the auricle. I make no particular effort to go through the periosteum with one sweep. Undue pressure if the bone is very soft might carry the knife too deep. Two sizes of the Whiting gouge together with a couple of pairs of Fergu-

son's bone cutting forceps are quite sufficient to remove the bone at any part of the field. I use a full curved curette with a sharp beak. An assistant keeps the parts exposed with a pair of small hand retractors. I have always thought that the self retaining retractor gets in the way, as it is not as easily shifted as the ones held by an assistant. I have had some experience with the motor driven but, and find it admirable. The only objection that I can see to it outside of the extremely high first cost of the apparatus is the fact that it works with exceeding rapidity and one is likely to get a little too deep at times. After the radical operation I use what is only a slight modification of the old Panse flap. In many of those cases of chronic mastoiditis, especially in the tubercular ones, I do not close the incision entirely. These cases are always slow to recover, and my experience has been that they do better if left open for a while. Nor do they tend to form a permanent fistula, which last has occurred only once in my experience. In this case after re-operating twice I found that the man regained and kept a good state of health as long as the wound remained open, so I decided to leave it so. Three years have passed since the last operation, and the patient remains in good health. In dressing a wound after operation I use iodoform gauze as a routine measure, and have never had any occasion to regret it. If the patient is making a normal recovery I dispense with any packing as soon as possible. In those cases in which epidermitization is proceeding slowly on account of a little pus being present, I use local applications of picric acid, trichloroacetic acid, or carbolated glycerine. Where you have a posterior opening filling the cavity with dry boric acid is efficient. I have never done any

primary skin grafting after the manner of Dench of New York, but believe that if it is properly done and sufficient care taken that it will shorten the time to recovery. There is one thing of which I wish to speak, and that is to call attention to the fact that in this part of the country at least it is difficult to get your patient at the elected time for operation. I mean that chronic suppurating ears go on for years taking treatment and as long as no

alarming symptoms arise operation is refused. I suppose this is true everywhere to a certain extent, but certainly more so here than in the eastern part of the country. If we could teach the people that mastoiditis may subside, but certainly is never cured without operation and could get our cases for operation earlier results would be better.

"K."—Kopetzky

"B."—Ballinger. Barnhill.



Septal Deviations

L. T. Ritchie, Trinidad, Colo.

Presented to the Thirtieth Annual Session of the New Mexico Medical Society
Las Vegas, N. M., Sept. 6-9, 1911

In presenting this paper for your consideration, the writer appreciates his inability to deal with a subject of so great importance, but will endeavor to bring out a few of the phases one might pursue.

As to etiology, there is no known single cause of these deviations, but theories galore, some of which are as follows:

Trendelenburg was the first to describe the Gothic arched palate with deformity of the septum nasi, and Freeman tells us that he examined three hundred and two cases of arched palate and found 96 per cent of these cases also had deviated septa the pathologic degree.

As the Gothic Arch is natural in infants, we can understand that anything that interferes with the development of the skull will interfere with the development of the hard palate and its consequent descent, hence some authors ascribe the deviation to rachitis.

Bosworth says that deformities are due to trauma which may not immediately produce deflection, but later causes a low grade of inflammation which finally results in a septal malformation. This no doubt, causes some of the cartilaginous deformities, but it is doubtful if it has any marked influence upon the protected bony parts.

Talbot says these deviations are due to unequal development of the adjacent bones more especially the middle turbinates, as these bones become enlarged the septum is crowded to the opposite side, the underlying cause being a neurosis or degeneracy in which condition there is an unbalance in the development of the bones of the face, jaws, dental arch, chest and shoulders.

Another theory is that deflected septa are due to irregularities of development caused by mingling of distinct racial types, but this may be contradicted by the fact that Jews coming from Russia and southwestern Europe belong to a most distinct type, having held a high degree of blood purity for generations and Glogau shows that 90 per cent of these have badly deviated septa.

The real cause is probably to be found in the relative over development of the brain case in comparison with other bones of the face.

In the human embryo, the parietal, frontal, occipital, superior maxillary, palate, nasal and ethmoid bones commence ossification about the seventh week, while the vomer shows no center of ossification till about the sixth month, hence the space for the development of the septum is impinged on very early by those bones with which it articulates.

As the child grows the pressure from

above increases on account of the rapid development of the brain case, while the palate growth is not so great and its descent slower, thus preventing straight development of the septum. Investigators have proven that the lower races such as the Australian aborigines, American Indians and Negro are practically free from these deviations, while the mulattos or those mixed with the white race are much more prone to these conditions; hence we may conclude that the higher and more rapid development of the brain and mentality, the greater the liability to deformities of this kind.

Regardless of cause, deviations may be classified as Cartilaginous and Osseus. The cartilaginous are, First, a deflection of the columnar cartilage which interferes with ventilation of those structures above it, but has no effect on drainage.

Second. An angular deviation placed antero posteriorly, which is harmful by its proximity to the middle turbinate and bulla ethmoidalis, thus interfering with both ventilation and drainage of the accessory sinuses.

Third. A perpendicular deviation which interferes with ventilation, but does not block secretion.

The Osseus are First. A bony ridge or crest along the upper border of the Crista nasalis and vomer which extends backward and upward starting near the floor of the nose. This may impinge on the middle turbinate producing irritation and a sense of stuffiness in the nose, also forms a shelf for the drying of secretions which when detached by blowing the nose, gives rise to Epistaxis.

Second. The perpendicular plate of the ethmoid is often convex or cup shaped and impinges on the middle turbinate on the side of the convexity obstructing drainage and ventilation of the superior

meatus and of the frontal, ethmoidal and sphenoidal cells, often giving rise to catarrhal and suppurative inflammations of the accessory sinuses by retention of the secretions which undergo decomposition, thus impairing the vitality of the mucous membrane, which becomes swollen, further interfering with ventilation and rarefaction follows. In the meantime pus producing germs find lodgment there and the result is suppurative inflammation of the sinuses.

Third. The combined deviation including the ridge along the crest of the vomer and convexity of the perpendicular plate of the ethmoid, which of course, has the ill effects of the two types as given above. As results of these different or combined conditions we have nearly all the pathology of the nose such as—Acute rhinitis, Chronic turgescient rhinitis, Chronic hypertrophic rhinitis, Chronic hyperplastic rhinitis, Acute and chronic sinusitis, either catarrhal or suppurative, Polypoid degeneration of the nasal mucous membrane and worst of all, Atrophic rhinitis.

The treatment of these conditions resolves itself to practically one thing, namely the surgical removal of the cause, and there are several operations that will to a greater or less degree correct all these deformities, but the one and best operation is the submucous resection. In doing this, the patient may be placed either in the sitting or reclining posture, but prefer the sitting posture because reflected light may be easier manipulated and there is no dripping of blood into the throat and the consequent desire of the patient to expectorate.

Almost all of these operations can be done under local anesthesia, which may be employed as follows: First apply a 1-1000 solution of adrenalin to both sides of the septum, then moisten a cotton tipped ap-

pliator in the adrenalin, dip it into flake cocain and rub the drug into the mucous membrane of the septum on both sides, wait two or three minutes and repeat, the patient is then in condition for operation.

The incision is made with a sharp knife cutting through the membrane and perichondrium to the cartilage, its position being anterior to the curve in the cartilage, according to Hajek or Killian but personally prefer the Freer incision which is made further back upon the summit of the vertical angle, beginning as high as the deflection and descending upon the ridge to the floor of the nose. Joining this cut a second one is made at right angles to it, forward along the floor of the nose extending a little beyond the anterior part of the deviation. Care must be used that the perichondrium is incised or the elevation of the flap becomes almost an impossibility. Now raise the anterior flap, then begin at the upper part of the incision and elevate the membrane, perichondrium and periostium above and a little further back than the deviation extends, gradually working the elevator downward to the floor of the nose, being careful to hug the bone and cartilage at all points. After this side is free make an incision in the cartilage anterior to the deviation being very careful not to cut through the perichondrium on the opposite side, which may be prevented by making haste very slowly.

This incision should be at least one and one half centimeters behind the under surface of the nasal bridge in order to insure the cartilaginous support. With a dull elevator beginning at the top of the incision where the perichondrium is less adherent, gradually free the membrane perichondrium and periostium from this side, being sure to have the elevation a little beyond the deviation above and posterior-

ly so that subsequent manipulations will not perforate the membrane, and also that sufficient space will be present to allow the removal of the cartilaginous and bony septum.

Now remove the cartilage with a Freer knife or Ballengers swivel knife, then with some bone cutting forceps remove that part of the perpendicular plate of the ethmoid and vomer that may be necessary. If the maxillary crest is so thick that this is impossible it may be removed with a chisel.

Some operators instead of elevating the mucous membrane over these bony ridges, which is sometimes very difficult, remove the bone in the upper part, then grasp the lower part outside of the mucous membrane with an Aesch septum forceps and fracture the vomer from its lower attachment by rotating the forcep on its longitudinal axis. To do this the forcep should be placed at least one centimeter above the floor of the nose to prevent tearing of the membrane below the forcep, their rotation fracturing the vomer which comes loose from the periostium and can easily be removed. The principal caution in doing this is to be sure the upper part of the septum is free, for otherwise there is great liability to shock and fracture of the fragile ethmoid.

Now examine the space between the hanging membrane to be sure there are no particles of bone or sharp protrusions that would cause pressure necrosis and infection, then pack the side which was of greatest convexity with gauze that is saturated with bismuth subnitrate and moistened with sterile oil, place a loose packing or dispense with it entirely, in the opposite side; if used, this may be removed in 24 hours, the tampon in the side of greatest convexity should remain at least forty eight hours.

Up to the tenth day after operation

keep the nose closed with a pledget of cotton, changing it when the nostril becomes filled with secretion. After this a 50 per cent aqueous solution of ichthyol should be applied to prevent the formation of scabs, it being necessary to continue this treatment from four to eight weeks.

In doing this operation there are certain difficulties in raising the membrane, especially along the vomerine crest, or other irregularities, but by careful work, and using the Freer incision the operator has a good view and by exercising great care with the proper instruments succeed in elevating the membrane in its entirety. The operation is also peculiarly liable to certain accidents, such as when incising the cartilage to cut through the perichondrium of the opposite side, which means a perforation unless promptly sutured.

Another is tearing through on each side, each tear being opposite the other, which also means a perforation. Destruction of the membrane on one side during elevation or while removing the septum with cutting forceps, the latter occurring when there has not been elevation of the membrane over a sufficient area.

If the cartilaginous deviation is close to the tip of the nose its removal sometimes results in sinking of the ridge or drooping of the tip of the nose.

Taking the operation as a whole, it seems to the writer that it approaches the ideal for the correction of most septal deformities, thus rendering the patient free from the dangers that naturally accompany all septal deviations that require surgical interference.

Dental Surgery

Chas. A. Eller, D. D. S., Albuquerque, N.M.

Read at the 30th Annual Session of the New Mexico Medical Society, Las Vegas,
September 6-9, 1911.

In presenting a discussion of Dental Surgery I am embarrassed at the very outset with a feeling that my subject is bigger than I am. But since I am talking to men and women who do big things, my mistakes may be overlooked over and I may get safely through to the end.

The subject is a very extensive one, and indeed, if I were to undertake to tell you all of what Dental Surgery is, you would all be doing Dental operations in a few weeks. Therefore, I will only try to give you my conception of Dental Surgery.

I wish at this time to thank the chairman of the Program Committee and the whole Committee for the honor bestowed upon me in asking me to appear before this State Society, a society of professional men and women who represent the profession that has within its scope the power to do most for humanity.

WHAT IS DENTAL SURGERY?

Gould gives the following definition for Surgery: "Formerly that branch of medicine concerned with manual operations under the direction of the Physician. The scope of the word is now widened, and is so bound up with general medicine that a strict and succinct definition is impossible. Instrumental and manual operative work is still the chief idea, and so far as it is related to the diseases commonly or possibly requiring operative pro-

cedure, surgery usually includes the treatment of systematic abnormalities."

Now Dental Surgery must be the surgery of the teeth. Why? Because the word Dental is derived from the Latin DENS-DENTIS, meaning a tooth. I am not able to specifically state why Dentists were given the degree known as a Dental Surgeon, but I think perhaps it may have been because nearly every operation a dentist is called upon to perform has in it in some way, or to some extent, surgical work.

We do not prescribe medicine in any form that does not in some way have a mechanical or surgical action go along with it, before it or after. Of course, the mechanical work becomes more or less routine, but so does giving calomel. Each case is a little different and the operator must know the anatomy of the organ on which he cuts or there may be serious complications. Some of these operations are as follows:

The devitalizing and extracting of the Dental Pulp (or nerve).

The subsequent filling of the Pulp Chamber or Canal, properly.

The insertion of a gold filling in a tooth so that a patient may have normal use of it.

The extraction of a tooth or teeth from the mouth.

The treating and curing of an abscessed condition of a tooth.

Many times the apex of the root of an abscessed tooth must be excised before it can be brought to a normal condition.

The Alveolar process must sometimes be curetted, or sequestrum removed before a normal condition can exist.

These are all surgical operations requiring an average amount of skill. When you think of what a surgical operation is you at once think of the knife or some cutting instrument. I will give you an example of what it is to extract the Dental Pulp from a live tooth:

Supposing the tooth in question has a cavity in it. The first thing is to excavate or remove all decay and putrescent food that may be in the cavity. Thoroughly cleanse cavity with a good antiseptic. There are germs and microbes in that cavity, just the same as in any pus producing cavity and they must be removed or destroyed. Now place a small pledget of antiseptic cotton, saturated with a solution of cocaine in water, in the cavity, and place over it a piece of soft rubber of sufficient size to fill the cavity. Press on rubber with instrument, thus forcing cocaine solution through the structure into the Dental Pulp (or nerve.) When thoroughly anesthetized, drill into the Pulp Chamber with the well-known Dental Engine. Now, use barbed broach and with much care extract pulp from cavity and canal. So far, the operation has been painless and the operator proceeds to carefully fill the pulp canal, which extends to the end of each root, with Gutta-Percha.

If a tooth becomes what is termed abscessed, and is left for months without attention, the ends of the roots become roughened, by being surrounded, as it were, by a pool of pus. Surgical interference is necessary to save the tooth. The

gum must be opened and the Alveolar Process cut through and the apical ends of roots be excised before pus will disappear and the tissues become normal.

Under the head of extraction of teeth, you may think there is no chance for surgery. However, some very nice operations come from the simple duty of pulling a tooth. As Man, the shining light of God's creation, moves up the plane of civilization, and stands straighter and more upright as compared to the ape, his honorable forbear, the mandible or lower jaw, grows shorter from the symphysis or chin, to the angle of the jaw, thus leaving less space for the third molar or Wisdom teeth to properly erupt. If you have one of these forcible reminders of a lower scale of humanity to extract, and it encounters the posterior surface of the second molar in trying to erupt, you will have an hour or two of practical Dental Surgery. The third molar frequently gets into such a position that the gum must be laid open and the bony process be drilled away in order that the operator may get hold of the offending organ with his forceps.

We come now to the Antrum of Highmore. The location of the Antrum of Highmore, or Maxillary Sinus, appears to make it a disputed field between the dentist and the rhinologist, being clearly associated on the one hand with the cavity of the mouth and on the other hand with the nose. If, however, one takes into consideration the etiology of the disease in the particular case which makes treatment necessary, the rights of either branch of the healing art become immediately evident. The dentist can avoid the conflict by treating only those diseases of the Antrum arising from Alveolar abscesses and other purely dental sources.

Another surgical procedure which

comes in the field of the dentist is the splinting of the lower jaw when fractured. This is a pretty hard operation to perform and the dentist who does one or more cases in a lifetime is in luck. The number of cases does not equal the number of dentists.

We have in our Monthly Dental Magazines some very able discussions on these two operative procedures, some by Dentist and some by Oral Surgeons, probably most by men who have the two degrees of M. D. and D. D. S. Personally, I have had only one genuine Antrum case. This case healed after antiseptic measures, followed by the use of Bismuth Paste.

ORTHODONTIA

I wish here to speak of the division of Dental Surgery known as Orthodontia, a subject worthy of discussion all to itself, and yet many would ask, Why? Orthodontia is the science which has for its object the correction of mal-occlusion and irregularities of the teeth.

Mal-occluded and irregular teeth are the cause of many bad oral conditions. To my mind, one of the things that make women beautiful is a clean, well-kept mouth with regular teeth. Can you respect a man whose mouth shows a lack of care, and whose teeth are irregular and covered with a parastic growth? Irregular teeth are much harder to care for than regular ones. Of course, the time best for correction is from the ages of ten to twenty-one years. In fact, the care of the teeth until the age of twenty-one years is attained has a great deal to do with the future condition of the teeth. But Dentistry of today must not be limited to mechanical changes that may be made on the teeth alone. It must be considered as reaching well up into the field occupied and supposed to be monopolized by the Rhinologist, and in some instances

it must even prevent the necessity of further operations.

The latest slogan by the up-to-date Dentist is Prophylaxis. The filling of teeth executed well or badly, has occupied the time of the majority of Dentists, and today is looked upon as being more remunerative than modern prophylaxis. The reason for this is that most practitioners clean off the teeth a little, prescribe their favorite mouth wash, and call it practicing prophylaxis, while in reality their prophylactic treatment usually produces only partial results.

The Doctor of Medicine stands in the lead in this great movement and in many places prevention, prophylaxis and sanitation are sounding the trumpet call that will free many thousand souls from the dreaded epidemics and diseases. We of the Dental branch of medicine can only hope and work to the end that we will not be so long in following our leaders, the physicians, as we were in the beginning in getting Dentistry on a practical, scientific plan.

The age of preventative treatment is ours, and he who has spent his life patching up waste already consummated is not the one the public is looking for. Preventative treatment, both in Medicine and Dentistry, is sought on every hand, and if we do not heed the call, our friends will. The time is at hand when many Dentists are specializing on Oral Prophylaxis for the prevention of all Dental diseases, and I predict that the time will come (when we are all dead and gone), that it will be hard and eventually impossible to find a man or woman who wears a plate or bridge or even has crowns in their mouth. This statement may seem vague and the time far away, and it is, but how long has it taken Dentistry to arrive at the present status? As far back as the Mediae-

val and even ancient times, history records the attempts made to replace lost teeth, with artificial substitutes. If then, up to the present time we have gotten where we are, what may we not expect in the course of the next few hundred years? The time is coming when a dentist will not know much about replacing lost teeth by artificial substitutes, but will instead, treat the teeth at regular and stated periods so they may not decay or become loosened by the ravages of the disease, *Pyorrhea Alveolaris*. Then in truth will the ancient saying that an ounce of prevention is worth a pound of cure.

I wish now to direct your attention to the dreaded and prevalent disease *Pyorrhea Alveolaris*. Take the words and they mean, *Pyo-*, or pus; *Pyorrhea*, a flow of pus; *Alveolaris*-an inflamed Alveolar tooth socket. "It is, with Tuberculosis and Dental caries, a universal disease. It appears in the human race in all climes and under all conditions; in the poor cereal eating natives of India as well as among the well-to-do beef-fed men of our own country. It is not a modern disease, since evidences have been found in early Egyptian skulls. Like Tuberculosis, it is a disease of domestication and condensed population. It is not found among people who live a free life in the open, yet take the same people and herd them in cities and they early exhibit the disease. It has been found that most domestic animals have the disease, also wild animals when caged, also 80 per cent of dogs over eight years of age."

The exhaustive study of the etiology of the disease by the best men of our profession has led most writers to believe that both general and local causes play an important part in its evolution. The general causes are such as are associated with a lowering of the resist-

ance of the individual. The local conditions which may predispose are also many. Dr. Talbot thinks that the teeth and jaws are degenerating structures which are destined to undergo progressive decline as civilization advances. At any rate, nowhere else in the body is there found so unsatisfactory a mechanical arrangement as that which causes the hardest tissues of the body, the teeth, to project from soft parts on to a free surface. The junction of the gum and teeth is bathed in a fluid which is full of bacteria. It is believed by many writers that the bacteria present in the pyorrheal pockets are important elements in the active production of the process.

The treatment that is practiced most universally for *Pyorrhea* is called the Rational Surgical treatment and calls for,

First: The removal of local irritants. The most important factor here is the removal of foreign bodies. Instrumentation to clean the teeth surfaces of calculi is essential. If teeth are loosened, they should be firmly fixed and supported.

Second: The application of some agent which will inhibit bacterial activity. Also some medical agent that tends to soften and remove the calcific deposits. Personally, I use two treatments of Aromatic Sulphuric Acid followed by one of 10 per cent solution of Chloride of Zinc. The last named tends to tighten the gums around the teeth, being astringent in its action.

There are a few people who say they can cure *Pyorrhea Alveolaris*. I seriously doubt if there ever was a genuine case cured. At least, from what I have seen of the disease in my few years of practice, I should have to see the case at both ends to believe that it was a cure.

The surgical part of the prevention of this disease is of the greatest value to

the patient, because the medication without mechanical or surgical interference of the calculi is of absolutely no value.

Dr. Geo. Edwin Hunt says in an article in his Magazine, "Oral Hygiene," January number: "Yesterday's practitioners of the healing art said: 'Let us pray;'" today they are saying, "Let us cure;" Tomorrow they will be saying: "Let us prevent."

Dr. W. C. Ebersole, M. D. D. D. S., of Cleveland, Ohio, says: "No other profession or calling offers so great an opportunity either for the development or advancement of the individual entering the profession, or to benefit and improve the physical condition of mankind than does Dentistry through the treating, correcting, preventing of a condition which is the greatest handicap of the human family today.

"Ninety-seven per cent and more of the human family today has been found to have faulty oral conditions. Careful estimates go to show that less than 10 per cent of the people of the United States receive dental attention and treatments other than extraction today." This fact coupled with the fact that of those who do have work done the per cent having it thoroughly done is small, leaves us in possession of the knowledge of the actual conditions, which are simply astounding.

Why are these astounding figures true? The fault lies with the Dental profession. The fault has been our failure to teach the importance of the teeth to the masses instead of to the few. We have kept our light under a bushel, as it were, not letting the knowledge of our accomplishments and abilities reach humanity as a whole. We have not kept pace with medicine in this respect, because we have lived within four walls and the results of our discoveries and inventions have been confined within the same space, while med-

icine has gone out into the highways and byways, conveying knowledge of the advancement made in her sphere. Our "sin of Omission" has been in not preaching the important part the teeth bear relative to the physical economy and the necessity of affording the proper care and treatment. Statistics go to show that Dental Caries or decay of the teeth is the most prevalent disease known to modern civilization, and is producing greater havoc in the human family today than all the other diseases put together. Dr. Ebersole further says that this is not an idle and ill-founded statement, but one based upon actual facts and figures.

I have looked into mouths of Tubercular people whom I firmly believe should lay all their tubercular trouble to the filthy conditions of the mouth and teeth. At least 95 per cent of all tubercular infection takes place through diseased or ill-kept mouths. And what is true of Tuberculosis is true of almost all contagious or infectious diseases. Is it then not time for the Dental profession to be up and doing? Is it any wonder that the best and most scientific men of the profession are giving their time to writing and lecturing on the subject of Oral Prophylaxis? The Dental Colleges are taking it up and the National Dental Associations and Faculties are doing great things to get the work started.

I could write of what I have read and what I think of Dental education in schools if I had the time and opportunity, but with these few thoughts I will close.

You may ask: "Where is your subject?" It is here: Dental Surgery is the art of keeping the human mouth and teeth in such a condition that the natural beauty of the individual will not be impaired and that the rest of the human body may perform its functions in a normal manner.

Tonsillectomy

W. G. Shadrach, Albuquerque, N. M.

Read by title before the 30th Annual Session of the New Mexico Medical Society, Las Vegas, N. M., Sept. 6-9, 1911.

Complete removal of the faucial tonsils with their investing membrane or capsule is absolutely the most satisfactory surgical procedure of all the many methods of removing the tonsils, is the opinion of our best men doing throat surgery today throughout this country and abroad, and gentlemen, when I use the word complete I mean all it carries with it and all the word implies, viz, freeing the tonsillar space by removing the whole tonsil with its investing capsule intact, anything that falls short of complete removal is bad and incomplete surgery and should not be done, as experience has shown it to be of little or no permanent benefit. It is especially essential and of primary importance to thoroughly understand and to have a mental picture of the anatomy and blood supply of the throat, and always stick to the tonsillar space, during the entire operation. The greatest source of hemorrhage (the dread of tonsil operation) is failure in getting all of the fibrous tonsil, tearing it, thus leaving portions of tonsil within the tonsillar fossa from which we have profuse hemorrhage just in proportion to the hard, fibrous, or hypoplastic condition of that portion of tonsil left, cutting the pillars with tonsil knives or lacerating them with the finger or some blunt instrument.

A clear knowledge of the anatomy and

blood supply will enable the operator to prevent in a great measure any alarming loss of blood. The operator who does not master the anatomy and blood supply of the throat is handicapped and should not attempt a complete enucleation.

Gentlemen, I wish here to speak of a variety of tonsils that is frequently met with but overlooked by the general practitioner of medicine and some specialists as well, and one that is a source of great detriment to its possessor, and that is the imbedded, submerged, and frequently diseased tonsil. On casual examination these tonsils are so very liable to be overlooked. Such tonsils do not project into the throat and lie hidden between the pillars and imbedded in the tissues of the lateral wall and soft palate. By palpation, a method that should always be practised, we often find a variable sized mass entirely hidden in these tissues. These tonsils can be plainly seen by causing your patient to gag or retch by pushing along over the tongue your tongue depressor until it comes in contact with the posterior wall of the pharynx, when by muscular action in the gagging we get the tonsils to protrude into the throat. This is the variety that is so frequently found in toxic conditions and when removed (which should always be done) there can be expressed from the crypts a number of masses of white cheesy

exudate that has a terrific foul odor. Gentlemen, these are the tonsils that nothing short of complete removal will be of any benefit. All other methods of procedure will serve only to make matters worse, these are the tonsils on which so many inadequate operations are done, leaving portions of the lymphoid mass within the tonsil fossa to continue its ravages on distant structures through systemic absorption. Gentlemen, I speak here of the tonsillotome, or guillotine only for the purpose of condemning them, as there are the fewest number of cases suitable for their use. When you find a pedunculated tonsil projecting into the fauces and easily engaged in the fenestrum of the instrument, a good operation can sometimes be done easily and quickly, but such suitable cases are very few indeed. It is not possible when a portion of the tonsil is submerged to do a proper enucleation with any of the numerous makes of tonsillotomes and to attempt it is poor surgery and not for the best interests of the patient. I condemn the practice because of these facts and because it is possible to do an operation in every case that is adequate and surgically correct, I have no instruments to recommend for other men. Every man should work with instruments to which he is accustomed and likes best, so you can make your own selection of mouth gags, tonsil knives, tonsil forceps, various shapes and sizes of enucleating instruments, and tonsil snares. In the latter instrument there are few to equal and none to surpass Tydings in my estimation and in my hands. I have four makes of tonsil snares but I invariably find myself using the Tydings instrument.

TECHNIQUE

If a hospital is accessible the patient should go there the night before to be-

come accustomed to the surroundings and to secure a night's quiet and rest. If he is allowed to stay in his own home you can't tell whether he gets this or not, not essential but a mouth wash, gargle and nose douche every hour for a few hours before the operation is a good habit to get into, and leave the choice of an anesthetic to the one who gives it, making only one suggestion to him, namely, put the patient under to the surgical extent and keep him there until you are done. It is very annoying to have the anesthetizer say: "Go ahead, Doctor" and on grasping the tonsil the patient begins to retch; I desist at once and wait for more sleep. If I were consulted as to the choice of an anesthetic I would select ether for obvious reasons, but men in this country seem to have the chloroform habit, while in eastern hospitals ether is given as a routine. In adults with courage, fortitude and a moderate control of tongue and pharynx reflexes and the stimulus of saving the hospital expense you can do a good office operation under local and injected cocaine, but never lose sight of the dangers of the latter drug. When you can deplete with local adrenalin you can use cocaine with impunity, but unfortunately you can not use adrenalin to that extent in the tonsil; I have used hydrochloride of quinine and urea in two or three cases of tonsil dissections with happy results and little pain.

For illumination I prefer a darkened room, ordinary head mirror, and a ground glass electric bulb light laying on the table beside the patient's head, on the opposite side to which I am standing. I use the ratchet mouth gag as it holds itself when properly placed and does away with an assistant, using wide fenestrated tongue depresser. I push the tongue down to the opposite side from the tonsil on which I

expect to work, handing the depresser to a nurse with instructions to hold it and see that she does it; if she does not you are working under disadvantages. Grasp the tonsil with some make of good heavy and strong tonsil forceps and with a right angled blunt pointed tonsil knife you separate both anterior and posterior pillars; this being completed I make firm pressure with forceps containing preferably gauze, thus controlling hemorrhage and getting it out of the throat. Now I grasp the tonsil in its vertical diameter, one blade of the forceps above and the other below, having the whole of the vertical diameter within the blades of the tonsil forceps, securing a firm hold and one that will not pull out. Now with a blunt pair of scissors I separate the tonsil capsule from the muscular walls, cutting through the plica triangularis severing it from its attachment to the pillar. In adults it is sometimes possible to save this sheet of mucous membrane by passing the knife from above downwards and backward between it and the tonsil, the under surface of which it covers. Now the velar lobe may be freed from the posterior pillar in the same way. The tonsil at this stage is drawn inward and right here is where some operators use their fingers to separate the tonsil. I do not, using my blunt pair of scissors instead, steadily pulling my tonsil downward and inward until I get it to the point of being ready

for the snare. Now I release my hold on the tonsil and with pressure sponges arrest and clean all hemorrhage from the throat. I now with the Tydings snare armed with a No. 5 piano wire or larger, insinuate my loop over the hanging tonsil and pick up the latter with the forceps and get my loop well back on the loosened tonsil and gradually, never rapidly, cut it off. If you are careful you will rarely have occasion to use any of the punch forceps to get remaining portions of the tonsillar tissue left. In a hard fibrous tonsil I prefer the mill wheel of the snare for obvious reasons. Sponge out all hemorrhage and treat the opposite side likewise. After which I use my Gottstein curette or other adenoid instrument within the naso-pharynx, it will never do harm and many times much good. The patient is now placed in bed, ordering a saline and liquid diet for twenty four or forty-eight hours with an antiseptic gargle or mouth wash containing a good percentage of carbolic acid. Gentlemen, I have found the method described one that is suitable for every kind and size of tonsil and is radical. I believe, in fact I know, there is much less danger of hemorrhage in tonsillar dissections than there is in the ordinary tonsillotomy, in which you often get secondary hemorrhage. I have never seen such in complete removal, but forewarned is forearmed, so take your Jacksons Haemostatic forceps and tonsil clamp along with you.

Abscess of the Liver

W. G. Hope, Albuquerque, N. M.

Las Vegas, September 6-9, 1911.

Read by Title before the 30th Annual Session of the New Mexico Medical Society,

Report of Eight Cases

There are two classes of liver abscess, the single, or tropical, and the multiple. The single, or tropical abscess is caused by various influences among which is malaria, exposure to wet and cold, alcoholism, trauma, the amebae dysenteriae which may or may not have previously excited intestinal lesions.

Abuse of alcohol is an important predisposing cause. In Waring's careful study of the subject of abscess of the liver, he found a clear history of abuse of alcohol in sixty five per cent of the cases.

Pyemic abscesses are, as a rule, multiple. Some of the causes of multiple abscess of the liver are phlebitis from thrombus of portal trunk or its branches, ulceration of the colon and rectum, appendicitis, typhoid fever, endocarditis, as a sequel to measles, epidemic influenza, ulcer of stomach, or almost any local inflammation, all of metastatic origin, septicemia or micro-organisms, from septic foci elsewhere, are carried by the blood into the liver and cause multiple areas of necrosis and suppuration. The liver then presents not one large abscess, but a large number well distributed throughout its tissues. The pus may vary from foul reddish to greenish material to the character of what used to be called in the preantiseptic days, "laudable pus." But the majority of cases contain a red thick pus, aptly named "pepper sauce pus." When the infection takes place along the bile duct, as the result of the entrance of

micro-organisms, the introduction of which is facilitated by the pressure of the gallstones, it is often found that the pus is not only distributed widely through the organ, but in addition the gall bladder is full of pus as well, so that the entire biliary tract is involved in the suppuration process." (Hare.)

Symptoms. The chief symptoms are intermittent fever, sepsis, (sweats and chills), enlargement of the liver, and pain. The pain is felt not only in right hypochondrium but in the right shoulder. Enlargement of the liver is constant.

The decubitus of the patient is characteristic. In advanced cases the patient lies on his right side with the right shoulder drawn down and the right knee drawn up to relieve the tension of the abdominal muscles. Jaundice is not common and occurs only when the enlarged liver or abscess makes pressure on the bile ducts. In all obscure cases with such symptoms exploratory operation should be made.

There is no variety of abscess where delay in operation is fraught with more serious consequences than in abscess of liver; hence whenever the symptoms point strongly to this condition, the exploratory operation should not be delayed. The operating needle, large size, attached to a vacuum syringe, for the pus is often very thick, should be driven slowly into the liver, either through the skin or from an abdominal incision.

The advantage of the vacuum syringe is that by slow insertion the pus

will be seen in the barrel of the syringe as soon as the abscess is entered and thus the risk is avoided of driving the needle beyond the pus cavity, thereby failing to secure the evidence sought.

When adhesions to the abdominal wall are formed, a trocar is inserted into the abscess and this affords a guide to a free incision, either by the knife or by inserting and opening dilating forceps.

Any broken down liver tissue should be removed, as much pus as possible drained out by position but not by pressure; any hemorrhage stopped by gauze packing; and one or two three quarter inch drainage tubes with large safety pins passed through their free ends should be placed in the opening to serve as a drain. It is usually not best to wash out the cavity—but when the abscess is very large or pus offensive, if we can make a counter opening or insert two large drainage tubes instead of one, a douching with boric acid solution may be helpful. However, with free drainage, douching is to be discouraged; this is equally true of meddlesome interference by inserting the fingers into the abscess cavity.

When no adhesions are found to exist, pack the incision, wait for adhesions to form or stitch the liver tissue to the abdominal wall.

When the case has not been diagnosed till marked bulging has occurred, it is usually safe to incise.

The cases that we report were scattered over a period of twelve years. On some of them I have very scanty clinical notes; some of them I have full notes; two written from memory only.

J. M. 35 yrs. German butcher, a steady and heavy beer drinker. Seen Sept. 2, 1892. Complained of soreness over whole abdomen, loss of appetite. Temperature ranged from 97 to 101 degrees.

Tongue coated. Had suffered for two past months from diarrhoea. Liver decidedly enlarged. Quinine 25 grains every twenty-four hours for four days failing to break fever, we looked for other cause. A soreness over hepatic region and pain in right shoulder, together with irregular sweats and fever, suggested a diagnosis of probable abscess of liver. Aspirating needle was inserted deeply into right lobe three times with negative results. The fourth insertion of the needle evacuated ten ounces of a reddish "pepper sauce" pus. No further operation was done. Temperature promptly dropped to normal. Appetite returned. Patient walked the streets for five weeks. Then the previous symptoms reappeared. Again aspiration was done and about four ounces of the same kind of pus was drawn from the same lobe the patient made an interrupted recovery, and is living in Albuquerque today still drinking beer all the time he can spare from his primary occupation—that of making sausage.

Case No. Two

M. M. Aged 40, Sept. 1893. Last week in Sept. temperature ranged between 96 and 102. Eighth day to twelfth day temperature stayed at or above normal during day hours. No night chart kept. Patient sore over right lobe liver. Very emaciated. One month previous had taken the Keely cure for alcoholism.

As patient lived thirty miles from my office and thought himself much better, I consented to his leaving the hotel and returning to his home at Belen—telling him that I was undecided as to diagnosis. That I believed it to be abscess of liver or "Alcoholic liver" (Cirrhosis of liver). He promised to return to me if the symptoms continued to trouble him. At this time there was very little enlargement of liver, but intense tenderness and even

pain at times. Three weeks later he returned to Albuquerque, consulted Dr. J. P. Kaster, who diagnosed abscess of liver, cut down and drained abscess from right lobe. This man too, still lives in my town, in good health. I meet him every time I leave my office. He will never die or move away.

Case No. Three, Nov. 26th, 1894.

Italian, male, 44 years old, alcoholic, a saloon keeper, consulted me for an illness from which he had "suffered eight months." He had taken quinine from many physicians and patent medicines from many druggists.

Favorable for my reputation as a diagnostician, he fell to me late in the quest, when the enlargement over right lobe of liver was very marked at a casual glance when patient was stripped. He gave the usual intermittent malarial symptoms of chills, sweats and fever; marked tenderness over the liver; right shoulder drawn down and forward. He was emaciated to an extreme degree.

I told him the danger of his disease and that an operation would be necessary.

He took an eighty mile buggy trip to San Pedro to arrange his business. Dec. 3rd, after locating a large cavity with a long aspirating needle, I cut down finding adhesions already formed in the right hypochondriac, evacuated seventeen ounces of pus. He lived until January 28th, and died of exhaustion, the continuous discharge from the abscess being something incredible.

Case Four.

R. R. A carpenter, 45 years old, had been "sick three or four months." Had "billious fever." When I saw him his temperature was often as high as 102 degrees, Pulse 100. Breath foul. Tongue coated. Tenderness and enlargement over liver, deep breathing caused pain.

He was aspirated and pus discovered. Detaching syringe, leaving needle in sight as a guide, made a free incision into the abscess, inserting two large drainage tubes. No irrigation. Patient was told to remain on his right side much as possible. Three weeks later patient died of exhaustion. This patient I think should have lived had he had good nursing. He was an alcoholic, lived and did his own cooking in a small alley carpenter shop. Had no nursing except what friends of his own habits rendered, the principal part of which was carrying him whiskey (before the days of hospitals in Albuquerque.)

Case Five.

A taker of seals of freight cars, 38 years old, had a freight car "bump" him over right lobe of liver. Did not cease work. Some weeks later had "typhoid fever." Was in Las Vegas Santa Fe R. R. Hospital for some five weeks. Never recovered any strength after left hospital. Three months later had lost fifty two lbs. in weight.

* Examination revealed marked enlargement over right lobe liver. Tenth rib resected in mid-axillary liver, incision made into liver. A beer bottle and a half of pus was drawn off. Twenty nine days later he was driving a delivery wagon for a grocery store. Is in good health today, twelve years later, doing well as a life insurance agent.

Case Six.

Mexican, Male, 43 years old. Alcoholic, sick three months. Enlarged right lobe liver, aspirated. Needle inserted directly into right lobe from an abdominal incision. Four punctures made deeply, no pus was found. Abdominal incision healed by first intention. Patient died about three weeks later. Postmortum revealed a large tropical abscess in vault of right lobe. I have always thought that we failed

to get pus by the aspiration of that liver because the needle was too small. Calibre of needle not large enough to carry the thick pus.

Case Seven.

American, Male, a quartz miner, 46 years old. Seven months ago was struck on right side by crank of a windlass with which he was raising ore from a shaft. Had been in bad health ever since. Was running an irregular low fever. Enlargement right lobe of liver. Very much emaciated. Aspirated from an abdominal

on, evacuated a large cavity of pus. Made a very slow hesitating recovery. In four months patient went east, wound still discharging markedly. Had been walking the streets for some weeks before leaving Albuquerque. Died three months after reaching Ohio. Details or cause of death I was unable to learn.

Case Eight.

J. G., 22 yrs. old, a farmer. with a revolver in his belt was wrestling, fell on the weapon and "hurt" his side. He was sick ten weeks before coming in for examination. Symptoms. Pain and enlargement over right lobe of liver. No jaundice or diarrhoea. Fever of a low in-

termittent type. Diagnosis abscess of liver. Resected a rib in mid-axillary line two inches below right nipple, evacuated about one pint characteristic "pepper sauce" colored pus. Drainage without irrigation. In hospital eleven weeks, wound discharged for four years, made finally a perfect recovery.

Three of the above reported cases were traceable to trauma. Three were alcoholic. Two no traceable cause. We may have abscess of the liver with absence of dysentery and jaundice and very little intermittent fever. Aseptic aspiration is the only way of clearing up diagnosis. The finding of malaria plasmodia in the blood or in stool aids in diagnosis.

With perfect adhesions and no leaky drains before too much destruction of liver tissue has taken place the prognosis in single tropical abscess should be favorable.

Free drainage without irrigation is the safest rule in treating abscess of liver. However, Case Number One made recovery and is well twenty years later. Was aspirated only. Dysentery as a cause of liver abscess has been exaggerated. Was present in but one of these cases. Possibly an incident rather than a cause at least in some cases.

Control of Smallpox in Rural Districts and Small Municipalities

H. M. Bracken, M. D.

Secretary and Executive Officer, Minnesota State Board of Health.
St. Paul, Minn.

The control of small-pox in the rural districts and in the smaller municipalities is to be secured in the same way as in the larger municipalities, viz., through vaccination. Small-pox cannot be controlled without vaccination.

The public demands quarantine for this disease largely because it is a loathsome and disfiguring disease. We should not mislead the public by catering to their unjust demands. Public sentiment may be honored to a certain extent but those who are responsible for the control of this disease have no right to yield to the extent of misleading the people. The people should know that quarantine alone will never control this disease. Further, we have no right to throw a heavy expense on a municipality by quarantine of small-pox in an attempt to do that which we know cannot be accomplished. Isolation is necessary to a certain extent but to give the public a sense of satisfaction or confidence in attempting to control the disease by isolation alone is a mistake. There are always a sufficient number of unrecognized mild cases, or concealed cases to keep the disease going, if we were depending for its control on quarantine or isolation rather than vaccination.

It is a common opinion that the infection of small-pox is air-borne for a considerable distance. This is a mistake. Like most other infections, this infection

may be carried by articles of clothing, etc., but if the infection is to be passed from individual to individual there must be quite close and somewhat prolonged exposure. It is also a common opinion that the disease is carried by a second or intermediate person to a third person. This is not true. Individuals living in a house with a small pox patient but not ill with the disease themselves will not spread the infection to others unless they have been in such close and prolonged contact with the patient as to have had a certain amount of infectious agent attached to their clothing. In fact the spread of small pox by a second to a third person may be treated as a negligible quantity in a well-vaccinated community. Public opinion is ready to demand great inconvenience for many individuals and great expense for a community, in order to prevent the spread of small-pox, when, as a matter of fact, the disease may be controlled by the personal expense of vaccination only, or even no expense, for vaccination should be free to all those who wish to take advantage of the public vaccinators.

It is absurd for those of us who are entrusted with the education of the people in matters pertaining to preventable diseases to advise or even condone the use of illogical or unscientific methods in their control. Quarantine is a relic of barbarism. It accomplishes nothing unless car-

ried out in a most inhuman way at great expense. One has but to recall the old shotgun methods used in attempts to prevent the spread of yellow fever before other means of controlling this disease were known, to realize the difference between quarantine and scientific control of disease. With our knowledge of vaccination, there is no more reason for trying to limit the spread of small-pox by quarantine than there is for continuing the shot-gun method of controlling yellow fever now that we know the disease can be controlled by simpler methods.

I presume there are few, if any, present who do not believe in the preventative influence of vaccination against small-pox. Why then is vaccination not universal? Simply because ignorant or misinformed individuals have sufficient influence with many state legislators to prevent the passage of compulsory vaccination laws or to secure their repeal when they already exist.

The leaders in the anti-vaccination movement have much to say about sore arms as the result of vaccination. We must admit that there are some sore arms following vaccination, but these are the result of infection, not of vaccination. and this infection, instead of furnishing argument against compulsory vaccination should be one of the strongest arguments in favor of it. Why? Because the more perfect the vaccination the less the liability of infection. Infection is due to the following: (1) impure vaccine; (2) faulty technic on the part of the vaccinator; (3) imperfect care of the vaccinated arm or leg after vaccination. With proper compulsory vaccination laws, all of these possibilities would be reduced to a minimum.

We often vaccinate in emergency—that is when there is a small-pox scare—

or we vaccinate just before the opening of school in the fall, the very worst time of the year. A great part of our vaccination is done, therefore, under the most undesirable conditions. If we had compulsory vaccination laws, any state could determine very closely the amount of vaccine that its public vaccinators would need each year, for this would be governed by the number of births, and the production of vaccine would be carried on under the most favorable conditions. When vaccine producers do not know how much of vaccine may be needed, they may be short in their supply when the heavy demand is made on them in emergencies, and then be compelled to produce vaccine for rush orders or in hot weather. If we had compulsory vaccination, the children would be vaccinated at the most advantageous period of life, viz., the cradle age, instead of during the school age. In the countries having compulsory vaccination laws there is not active vaccination carried on during the two or three hottest months of the year. In our country, where we try to secure vaccination through the vaccination of school children, we do the greater part of the work in September, one of the most undesirable months of the year so far as the vaccine is concerned and one of the months which is most conducive to arm infection after vaccination because of the heat and dust. If we had compulsory vaccination laws, with well-trained vaccinators to take care of the poor, we would not run so great a risk as we do now of having sore arms.

Although the influence of demagogues and misguided individuals is often greater with legislators than is that of scientific leaders, the need of educating the people as to the control of small-pox by vaccination rather than by quarantine

is imperative, and it seems to me the method adopted in Minnesota in 1908 is worthy of consideration. This consists in (1) placing a premium on vaccination by allowing the vaccinated privileges not granted to the unvaccinated, and (2) refusing to endorse the expenditure of considerable sums of money in an attempt to control the disease by rigid quarantine. It is well known that certain communities that have tried to control small-pox by quarantine have failed, and have been compelled to go back to the old system of vaccination as a means of protection. Vaccination is a small expense to the individual.

I wish to emphasize the fact which I have already stated, that quarantine is simply a relic of barbarism. There are only a few diseases that are now under quarantine regulations and most of these are diseases in which quarantine was chosen as the means of control before anything was known as to the cause of the disease. Fortunately, in most instances in which the cause of the disease has been discovered, scientific methods for its control have been adopted and rigid quarantine abandoned. Take yellow fever as an example. A few years ago an outbreak of yellow fever demoralized commerce and interfered with the carrying out of the general intercourse of the community, but when it was found that the infected mosquito was the only means of transmission the old system of quarantine was thrown down.

New diseases come up and we study them carefully. Take epidemic anterior poliomyelitis as an example. In the olden days undoubtedly the public would have demanded that health officials establish a rigid quarantine. At present the people ask the public health officials about the probable danger and are given advice. Instead of establishing a rigid quaran-

tine, it is sufficient to point out the lines of probable infection and establish a system of isolation, similar to that used in Minnesota under the regulation that reads as follows:

Every case of epidemic anterior poliomyelitis shall be reported to the local health officer at once. The patient shall be isolated for a period to two weeks from the onset of symptoms. All other children, teachers or others having to do with children residing in the affected household shall be kept under observation for a period of three weeks from the date of last exposure within the household; they shall not attend during this period day school, Sunday school or any public or private gathering whatever. Residence, boarding or lodging in a household during isolation therein of a patient suffering from anterior poliomyelitis shall constitute exposure. The discharges from the nose, throat and mouth of the patient must be received on cloths and burned at once. After death or termination of isolation all personal clothing and bedding of the patient, together with the contents of the room and the room itself, must be thoroughly disinfected under the personal supervision of the local health officer. In case of death a public funeral or viewing of the remains of the deceased is forbidden. Every doubtful case of anterior poliomyelitis shall be classed as of epidemic type and cared for accordingly until proved to be otherwise.

I think I have said enough to show that the control of small-pox is no different in the country districts and the smaller municipalities from what it is in the larger centers.

In January, 1908, the Minnesota State Board of Health put into effect the following regulations:

The local health officer having knowledge of, or having reason to suspect the

existence of small-pox, shall investigate and at once place on the house where small-pox exists a sign setting forth the facts. This sign is to serve only as a warning to those who may wish to avoid the house, and not as an indication of quarantine. When the attending physician considers a small-pox patient as having recovered, he shall report the fact in writing to the local health officer, who shall thereupon remove the warning card from the house. The patient must not leave the house until after the removal of the warning card.

The apartments occupied by a small-pox patient shall be deemed infected, and when vacated by death or removal of the patient shall, together with their contents, be thoroughly disinfected under the supervision of the local health officer.

Every physician shall immediately report to the local health officer, in writing, the name of every small-pox patient under his care, the state of his or her disease, and his or her place of residence. A report must be made for each case as it occurs in a family or household.

Every physician shall report, in writing, to the local health officer the death of any small-pox patient under his care within twelve hours thereafter.

The local health officer of any city, village or township must report within twenty-four hours to the secretary of the Minnesota State Board of Health, all cases of small-pox occurring within his jurisdiction, and the date of the removal of warning card.

Following an exposure of small-pox, every individual who cannot show evidence of recent successful vaccination or a recent attack of small pox must be

vaccinated (within three days of the first exposure) or placed under the same isolation restrictions as small-pox patients.

If small-pox prevails in a community or if the disease appears in a school, all unvaccinated teachers and pupils must be excluded from school for a period of three weeks unless vaccinated within three days of first exposure. Failing to comply with this requirement, the school must be closed for a period of three weeks.

If small-pox appears in any class in any college in Minnesota, all unvaccinated teachers and students in the class must be excluded from recitations for a period of three weeks unless vaccinated within three days of the first exposure. Failing to comply with this requirement, the classes attended by such teachers or students must be discontinued for a period of three weeks.

All persons having been ill with small-pox must have their clothing disinfected and take a disinfecting bath before being released from quarantine.

These have proved quite satisfactory. They call for the isolation of the patient without quarantine on the premises. They place restrictions on the unvaccinated and grant privileges to the vaccinated; in other words, they penalize the unvaccinated and put a premium on vaccination. Through these regulations Minnesota, a state without compulsory vaccination laws—in fact a state without antivaccination laws—has secured a fair degree of vaccination, for the people realize that they must protect themselves

h from the disease and from the inconvenience of restraint in the event of exposure.—Journal A. M. A., October 14, 1911.

The New Mexico Medical Journal

Volume VII

NOVEMBER, 1911

No. 2

E · D · I · T · O · R · I · A · L

Dr. Edwin B. Shaw, a member of the council of the New Mexico Medical Society was a business visitor to Las Cruces recently and while there went through the offices of the New Mexico Medical Journal with a critical eye. Dr. Shaw is located at Las Vegas and is a valuable member of the profession.

A MEDICAL PRACTICE ACT

A copy of the proposed Medical Practice Act has been mailed to each member of the New Mexico Medical Society.

This act has been prepared by the committee on Legislation of the Society and is the act that it is proposed to ask the legislature to pass at its session next year.

It is the desire of all the members of the Legislative committee that the members of the New Mexico Medical Society study this act carefully and explain it as carefully to the various members of the legislature with whom they may come in contact. There is nothing in the act that is unfair or unjust and its passage ought to be easily accomplished. There is no doubt that there will be opposition—there is always opposition to anything for the public good, but if ever the medical profession needed the support of the public for the public good they need it at this session of the legislature and they need it to have favorable action on the MEDICAL PRACTICE ACT.

MEETING OF THE RAILWAY SURGICAL ASSOCIATION OF THE SOUTHWEST.

The second annual meeting of the Railway Surgical Association of the Southwest was held in the rooms of the Y. M. C. A. at El Paso, Texas, on October 20th and 21st. The minutes of this meeting are published in another column.

This association is the outgrowth of the broadening of the New Mexico Railway Surgeon's Association and is open to membership to the railway surgeons of New Mexico, Arizona, Texas west of the Pecos River and the Republic of Mexico.

A full meeting was impossible inasmuch as there are many railway surgeons who were unable to be present at that time, but the attraction of the splendid program together with the statehood jubilee and all that it had to offer were the means of bringing together a most excellent program which was enjoyed by all and which made up in class what was lacked in numbers. The papers were all of a high order and most practical.

Recently the secretary of the New Mexico Medical Society mailed to each member of the society a copy of the proposed medical act that the Society hopes to have enacted into law at the next legislature—the first state legislature. We ask that each member read this act carefully and write at once his approval or condemnation to the chairman of the legislative committee given on another page of this issue of the Journal.

THE JOURNAL AND THE COUNTY SOCIETY

From time to time in the columns of the Journal the attention of the county societies has been called to the need of support of the Journal by means of notes and reports, etc., of the various meetings of the county societies. A review of the pages of the issues of the past year will show very few notes from the county societies and it appears as though the present volume will be as lacking in news that will interest the members of the county societies.

The Journal is published by the New Mexico Medical Society in place of the annual volume of the proceedings for the purpose of making the records more attractive and at the same time more interesting and this cannot be done without the help and support of every member of the society working through the medium of his county organization.

The secretary of a county society has no particularly arduous duty to perform and it takes but a few moments to write up a short and lucid account of the transactions of the meetings. To mail them is the work of but a moment and the managing editor does the rest. Simple as this is, very few do it and to judge from the reports that are sent in for publication these

must be few if any active county societies in the state.

At the Las Vegas meeting the managing editor made a detailed explanation of the work to the House of Delegates and made a plea for a more earnest and active support of the Journal. To this appeal some response has been made as will appear from a careful perusal of the advertising pages, but even here the response has not been as generous as it should be and it is to be hoped that the December issue will show an improvement along this line as well as in the matter of a detailed report from each county society.

BERNALILLO CO. NOTES

Bernalillo County Medical Society met in regular session. Meeting called to order by President Dr. H. B. Kauffman.

Minutes of last meeting read and approved. Bills—Dr. L. P. Rice for printing Hospital Programs for visiting physicians. \$2.25 allowed and ordered paid.

Paper—Dr. L. P. Rice, Pelvic Inflammations. Paper, Dr. Robert Smart, Duodenal and Gastric Ulcers. There being no quiz the papers were discussed in general by members present.

The papers were of unusual interest and the discussion active.

Visitors, Drs. Moran, Cipes, Mason, and Miss Mason.

Members present: Drs.. Shortle, Shadrach, Cartwright, Frisbie, Selber, Spargo, Reidy, Rice, Kauffman, Osuna, de la Vergne and Tull.

Business of local interest taken up.

FRANK E. TULL, Secretary.

The Salient Epidemiological Features of Pellagra

By C. H. Lavinder, Passed Assistant Surgeon, United States Public Health and Marine-Hospital Service.

In view of the importance of a thorough knowledge of the subject we produce from Public Health Report the article below:

The developments of modern medicine have repeatedly shown the great value which is to be attached to epidemiologic studies as an aid in the elucidation of the etiology of disease. It seems remarkable that such studies are lacking for pellagra. Many important epidemiologic facts have been observed and recorded for this disease, but anything like complete and detailed studies do not as yet exist.

The only modern work of this kind which we possess is that of Sambon and that of Alessandrini. Both of these authors have made important contributions to the subject, but each was striving to establish his own hypothesis of the etiology of the malady. Their contributions therefore are necessarily wanting a certain judicial point of view which would have much increased their value.

It is to be observed, moreover, that the studies of these two authors were made exclusively in Italy, and that practically all recorded epidemiologic observations refer, if not to Italian pellagra, at least to the pellagra of southern Europe. Such observations are lacking for many places where the disease is known to be epidemic, and we have none for the United States.

If careful studies of this nature, both extensive and intensive, could be made for many places, a comparison of results would establish on a firmer basis many points of importance which are now obscure and might serve at least to give us a more definite idea as to the direction of our future work on the all important question of the etiology of this disease. Ultimately of course such studies must lead us back to the individual patient for completion.

It is intended to assemble in this paper, without very much discussion, the epidemiologic data we already possess regarding pellagra with the idea of trying to make some estimate of how incomplete these data are, and what indications they may perhaps show.

First with regard to prevalence and geographic distribution, it may be noted that the statistics of pellagra are for many reasons notoriously inaccurate, and the general geographic distribution of this disease is in all likelihood uncertain. Sambon's expression that our knowledge of its geographic restriction very likely represents only the limitations of our information as to its extent should be borne in mind.

At present in a general way the disease is probably most prevalent in North-

ern and Central Italy, Southern Roumania, the Austrian Tyrol, Southeast Hungary and the Southeast United States. Lower Egypt might, perhaps, be included. It has now been reported from various parts of the world, both in the Eastern and Western Hemispheres, but on the whole displays at least certain geographical limitations, although these are not easy to define with any degree of accuracy.

Roussel (1865) wrote as follows concerning the geographic distribution of pellagra: "Recently this malady has invaded new countries, and to-day it is found to the south of 47 degrees of north latitude between 10 degrees of longitude west and even beyond 25 degrees of longitude east, meridian of Paris, extending over a long zone of the temperate region of Europe, from Cape Finisterre to the banks of the Sereth, across the Pyrenees provinces of Spain and of France, Upper and Central Italy, and, in the basin of the Danube, upon the eastern and southern slopes of the Carpathians, even to the frontiers of the Russian Empire."

Since this date the disease has been much more extensively reported, and may be even much more widely prevalent than present reports show. It may in a general way be said that pellagra is confined to tropical, southern north temperate, and northern south temperate zones, and perhaps nothing more definite can now be said in a general statement.

Its local geographic distribution presents more striking peculiarities. In Italy, for example, it has for generations been endemic in the northern and central parts of the peninsula, but has definitely spared southern and insular Italy, though endemic in the island of Corfu, just across the Adriatic. In recent years, however, it appears to be slowly advancing southward. In Roumania, on the other hand, long en-

demic in the south, it appears to be slowly traveling northward. It is endemic in Northern Italy and in the Austrian Tyrol, yet contiguous Switzerland and Germany have always escaped. Again, endemic and quite prevalent in Lower Egypt, it is comparatively rare and sporadic in Upper Egypt. In the United States, also, there seems a certain geographic restriction to the southeastern States.

Such sharp limitations are not constant, however. From Roumania it has apparently invaded neighboring parts of Russia and of Austria Hungary, and is scattered along the Danube.

Without attempting any exhaustive statement of these peculiar and sharp limitations a glance at a map will show that such peculiarities are evident and striking. One other fact may be noted here, and that is the practical disappearance of the disease from France where it was once endemic and rather widely prevalent. In Spain, too, the disease has never seemed to spread widely.

It is not to be forgotten in this connection that the "zeist" idea of the etiology of pellagra has been so widely accepted that practically all pellagra literature bears more or less the coloring of this theory. Geographical observations have likewise not escaped this bias, and conclusions are not infrequently drawn which a strict estimation of facts do not entirely warrant. The statement that pellagra occurs only in those countries which grow and to a large extent subsist on maize products is, in itself, not only a statement of a very general nature, but is so wide as to include perhaps too much. Corn is grown and used as an article of food so extensively over the earth's surface that it might, with similar reason perhaps, be adduced as an etiologic factor in other diseases as well as pellagra. In other words,

a premise of this character is so broad it weakens the conclusion.

Among other general factors climate seems to exert no especial influence, though as noted above, the disease seems to be confined to the tropical and the warmer parts of the temperate zones. The influence of climatic factors on the spoiling of corn are important, as is well known. Seasonal influences to the "zeists" are also of great importance for similar reasons. The relation between symptomatology and seasons is discussed later.

Meteorologic and telluric conditions, outside of their well-known relation to the corn theory, appear to present nothing noteworthy; although many of the older writers have paid a good deal of attention to excessive moisture, dryness, etc. The relation of the erythema to sunshine is mentioned later.

The topographical distribution of the disease has, in the opinion of most observers, furnished no facts of importance. In the recent work of Sambon, however, in support of his simulum theory of pellagra, great stress has been placed on the topographical distribution. This forms an essential feature of this hypothesis. His observation goes to show that the disease is linked to the swiftly running streams of hilly territory in which the simulum breeds.

It is certainly remarkable and striking to find, as we constantly do in the Italian reports, certain comparatively small areas in the midst of a large endemic section, reported as free of the disease; or certain other areas, contiguous to endemic regions yet never reporting it.

Investigating pellagra in Italy I have been frequently impressed with the statements of practitioners in pellagrous sections that all of their cases come from this or that restricted locality.

Alessandrini, in his work, has also

reported this peculiar "patchy" distribution of the disease.

Disregarding all etiologic theories, evidence is accumulating that the disease is one of locality or place. If established, this is a very important observation. Further reference is made to this later.

One or two of the older Italian authors have also tried to show that the disease did not occur along the seacoast, but subsequent observation has not entirely sustained this.

One very striking fact may be included here, which has been confirmed by all observers of European pellagra. Pellagra is largely rural, and rarely urban. It is the agricultural, rural classes, the poor peasants of Italy and other parts of Europe, who have borne the brunt of its ravages. The city dweller, poor and rich alike, has always, to a large extent, escaped. In a trip through northern and central Italy recently I took pains to make close inquiries and observations regarding this point and always received marked proof of its confirmation. The disease does occur in the cities rarely but the cases are so few as practically to be negligible.

This has always seemed to be a constant feature of pellagra but so far as reports show, it is not true of the disease in the United States. Men with the most extensive experience believe that the small, mill towns and villages of the southern states suffer worse from the disease. Of course such a radical difference must await fuller observations for its confirmation.

Economic and hygienic conditions, and food supplies.—It is of course a general biologic law that poor economic and hygienic conditions, with bad water and poor food, are important factors in the production of disease, but these factors have more than this general significance with regard to pellagra.

Ever since pellagra was first described all have united in condemning the wretched conditions under which sufferers from this malady have been found to exist, as well as the poor quality of their food supply. In Europe pellagra is practically limited not only to the agricultural classes, but to the poorest of these classes. It is those who are poorly clothed, badly housed, and miserably fed; it is those who live in the greatest poverty and subsist on a diet which is unvaried in its monotony, often insufficient in quantity, badly prepared, and not infrequently of the poorest quality. Largely for these reasons the disease has received its sinister reputation and is confessed with shame.

This apparent relation of the disease to the character of food supply has furnished the field for most of the etiologic theories and speculations. Whether ultimately this shall prove to be an important etiologic factor or only one of the numerous other factors remains to be determined. But the fact is not to be overlooked that in Europe the great majority of those who suffer from pellagra do have a poor food supply.

Again, in the United States this does not seem a marked feature of the disease.

The malady, however, does not always spare the well-to-do classes, urban or rural, even in Europe. Cases, and even severe cases, among the better classes are not of frequent occurrence nor are they of such a great rarity. It is a circumstance to be remarked that in Europe occasionally certain isolated families, in easy circumstances, have been known to suffer severely from the disease for one or more generations. This may suggest hereditary influences but does not exclude local conditions as etiologic factors.

In the United States numerous cases

are constantly being observed among the well-to-do classes. Statistics are as yet, however, lacking.

The relation of the disease to water has of late attracted much attention. As noted, it is an essential feature of Sambon's hypothesis. Alessandrini also has made it an essential part of his theory and claim that the disease is due to a water-borne nematode worm of the family Filaridae, and is prevalent in those places which use polluted, surface waters. Siler and Nichols have directed attention to the frequent presence of amoebiasis in pellagrins and suggested a possible relation to water. Terni and Fiorani, in a way, have recently pointed out an apparent relation between pellagra and certain water courses in northern Italy. Some of the older authors also have expressed such ideas.

It is to be noticed that all of this brings the disease into relation with water, but the character of this relation, in the opinion of these observers, is diverse. This point demands further attention.

With regard to age incidence of the disease there is some discordance. It may be said, however, that pellagra occurs at all ages, including even the infant at the breast. The greater number of cases are found in the active period of adult life from about 20 to about 40 years of age. Children—even young children—do not escape, as many observers believe, but, as Neusser has pointed out, they seem to possess a certain tolerance for the disease, presenting often only a mild erythema with no constitutional disturbances whatever. With Sambon, in Italy, I have myself frequently made this same observation. Many cases in young children are being reported in the United States, and among them not infrequently are seen severe cases.

With regard to sex, it probably can not be denied that women suffer more than

men, but the difference in Europe is not large; furthermore, it is to be observed that the preponderance of the female sex is found to occur during the active sexual period of life and is possibly due to the additional burden imposed by child-bearing.

The statistics from which these conclusions are drawn are compiled from the agricultural classes of Italy and Roumania, largely; and the conditions of life, with regard to labor, are just as severe for the women as for the men. So that during the childbearing period the women are called upon to assume an added burden. The preponderance of females is by some also attributed to the additional factor of a more susceptible nervous system.

In the United States, although statistics are scant, it seems undoubted that there is a marked preponderance of females and, in the Southern States, negro families.

With regard to race and nationality there is observed no especial immunity or predisposition. It has been said in a general way that the negro of the Southern United States is a marked sufferer from the disease; but here again statistics are lacking.

In the matter of occupation it is evident in Europe that the agricultural class—the field laborer—is the worst sufferer; and it has been further pointed out that it is the poorest of this class which is so much predisposed to this disease. It is somewhat difficult here to separate the several factors which might play a part.

It has been stated above that apparently in the United States the field laborer is not the worst sufferer from the disease.

The question of heredity in pellagra may be considered a debatable one. In a disease whose etiology is unknown this question is not always easy of determina-

tion. It has never been established, and very rarely, if ever, claimed, that children are born with the disease. It has been claimed by many that the children of pellagrous stock often show hereditary anomalies of degeneracy, and a predisposition to the disease. Indeed the general opinion is that pellagra is hereditary largely in the sense of predisposition. Even this view, however, has met opposition at the hands of some observers of wide experience. It seems not unfair to say that heredity is at least open to some doubt.

Is Pellagra contagious?—This is a question which was much discussed, and about which many doubts were expressed in the earlier history of the disease. Modern writers, however, have seemed to regard this question as determined, and most of them assert that the disease is not contagious.

There are undoubtedly sufficient observations to exclude any idea of its transmissibility in any direct way from person to person. One or two may be worth mention. At the pellagrosario at Mogliano Veneto, near Venice, Italy, where for many years large numbers of pellagrins have been treated (at present some 400 or 500 inmates with about 60 or 70 employes) no attendant or nurse has ever been known to develop the disease. Such observations could be multiplied. Neusser states that he has many times observed in a large family, all living under the same conditions, only one member stricken with severe pellagra while the rest remained in the best of health. Such an observation has been confirmed scores of times. Facts of this character certainly seem to exclude any idea of contagion in the strict sense of that word.

As to whether the disease may or may not be transmissible in some remote

or indirect way may be, in the present state of its etiology, certainly open to question. It is the general belief that the disease is not communicable in any sense whatever. It may be repeated here, however, that at least in Italy and Roumania, it does possess the characteristic of slowly extending its area of endemicity. This characteristic, however, does not necessarily imply any idea of transmissibility.

In the United States several observers have again raised the question of contagion and affirmed a belief in its probability.

If one may speak at all of immunity in pellagra the disease does not appear to ever confer any individual immunity. On the contrary it has repeatedly been observed that apparent cures are often followed by recurrent phenomena of the disease either at close or more remote periods of time.

Pellagra may be classed as endemic, at times epidemic, but never pandemic. It is a disease peculiarly endemic in character, as has already been noted. At certain seasons or in certain years the number of those affected within the area of its endemicity may show a marked increase. In its history it has also appeared in new territory, often far remote from its known endemic areas, as, for example, its more or less recent occurrence in America. From these points of view it may deserve to be called epidemic, but it has never shown any of the characteristics which mark the great epidemic diseases, with their extensive ebb and flow.

Reference has already been made to the possibility of the disease being one of place or locality. Certain other similar things may be noted which seem to show that pellagra presents the characteristics of a "place infection" in the sense in which the expression has been used with regard to beriberi.

The recognition and early development of the disease in the United States has furnished more than one instance which might possibly lend color to such an idea. It will be recalled that the disease in America was first observed in insane asylums, and more than one asylum awoke suddenly to find a large percentage of its inmates suffering from this disease (although many of the first observations, in South Carolina, at least, were in cases who had pellagra on admission). Subsequent investigation showed that the disease had long been present among the inmates of, as well as the new admissions to, these institutions, and doubt was created as to just what percentage of the cases could be charged to development within the institution. The various factors in the situation have not all been untangled, and conclusions are difficult to form. From the history of these situations and a study of conditions, however, one is almost forced to admit that these occurrences present at least some analogy to the so-called "place infection" of beriberi.

In the area of its endemicity the disease often shows other queer turns in the peculiarity of its dissemination. Sometimes all of the members of a family or house may suffer from it; just as often, indeed oftener, only one or two. Alessandini states, for example, that in certain parts of Italy in the examination of 269 families composed of 1,659 persons only 274 pellagrins were found among them. Only 5 families had as many as 2 sick. Among them was one family of 21 persons which had only 1 sick. Again, out of 119 families composed of 528 persons there were only 129 pellagrins; of these the families worst had, in one case 2 sick out of 3; and in another, 3 out of 6. One family of 13 had only 1 sick. In my personal experience in the United States I

have three times seen orphan asylums suffer severely from the disease, although in each instance the children seemed generally healthy, the food supply good and abundant, and nothing in local conditions to indicate any especial reason for poor health among the inmates. In almshouses I have seen cases at times, while the large state prison at Columbia, S. C., was, when inspected by Babcock and myself, found singularly free of pellagra, although the disease is very prevalent in the neighboring insane asylum, as well as through the state generally. Later I saw one case in a prisoner discharged from this penitentiary, and, strange to relate, he was a man of the better class and had not eaten prison fare, but received his food supply during incarceration largely from relatives and friends. Another odd fact is the apparent immunity enjoyed by the Italian army, which, since military service is compulsory, is recruited from all over the Kingdom. I have been assured by medical officers of the Italian Army that except on recruiting duty pellagra is a disease of which in their official life they see nothing. Pellagras are not recruited. It is, however, reported, I am told, among the Carabinieri at times.

The seasonal incidence of pellagra is one of its well known and marked characteristics. With striking regularity its severe manifestations become apparent at two seasons of the year—spring and fall. This has furnished the opportunity for much etiological speculation, and has raised the question of the relation between the pellagrous erythema and exposure to sunshine. Such a relationship is undeniable, but is by no means definitely understood.

Do any of the domestic animals suffer from pellagra? Despite assertions to the contrary, I do not think any unbiased in-

dividual can be convinced that such cases have ever been observed. Moreover, in spite of the long series of feeding experiments in both domestic and laboratory animals no one has ever yet produced in them any morbid condition which agrees in any sense with human pellagra. Further, experiments on laboratory animals, including monkeys, by the injection of body fluids and tissues have likewise given no conclusive results.

With regard to the disease itself some facts of importance in this connection should be recorded.

So far as clinical characteristics are concerned pellagra is a general disease of marked chronicity with periodic exacerbations of a peculiar kind; also the intervention at times of certain very striking attacks of a fulminating nature—so-called typhoid pellagra and allied conditions. These acute incidents are very notable phenomena in the evolution of the disease and have always attracted much attention. Their nature is obscure.

Then in the inception and evolution of the disease what may we regard as its earliest symptomatology, or rather what particular system of the body seems to be first involved in the morbid process? This is a point on which writers do not agree. It is a matter of importance in some respects since it may lead us to a suspicion of where may be found the "infection atrium," if I may use such a term without implying any etiologic deduction. Is it the gastro-intestinal tract? Is it the skin? Can it be the respiratory tract? We may at least say, however, that both from clinical and pathological data the morbid process displays its most marked and most essential effects upon the central nervous system.

Pellagra again is, in a sense, a secondary disease, a morbid process which, so

to speak, engrafts itself upon some preceding morbid condition or depressed state. This is a fact to well supported to admit of denial.

Does the disease display any "latency" in the sense, for example, of the accepted "latency" of malaria? Such an observation has been made by some writers, but is by no means definitely established. It does seem undoubtedly true that an individual presenting typical pellagrous phenomena for one or more years may for an equally long while cease to display active evidence of the disease, but whether this may be spoken of as "latency" or not is questionable.

The disease displays a very marked variation in its virulence and intensity. At present in America it is observed to run a more acute course, to display more evidences of an intense intoxication, and to give a much higher mortality. These same characteristics were noted by the early Italian French, and Spanish writers. In Italy, however, now for a long while the intensity of the disease has been steadily diminishing, severe types are comparatively rare, and the mortality is much reduced. The interpretation of this change in the character of the disease is of course uncertain, but it may perhaps be inferred that the Italians have developed a partial immunity to pellagra. Certainly no other explanation seems so obvious. Moreover it is a matter of fact in Italy, that in treatment change of diet and surroundings very frequently results in a cure, or at least an arrest of the disease. The Italian pellagrosarios, where the treatment is largely dietetic, obtain very fair results. This is not true, however, with the severe types of the disease seen in America. The important point is, what effect is produced on the disease by the administration of good food in sufficient quantity with change of sur-

roundings? Is pellagra curable, at least in its less intense form, by these means alone? Here too may be asked, what is the real result of arsenical treatment? Reports are very discordant.

Here also may be put the ever-present question in pellagrous etiology, Is there a "pellagra without maize"? As Sturli has said, even the most pronounced "zeist" could not possibly deny that such cases have occurred and do occur. There are many well-authenticated cases of undoubted pellagra which have never eaten maize. Such cases are, however, sporadic, and up to the present time endemic pellagra without maize is unknown unless one accepts such as occurring in parts of Spain. There is an endemic disease called pellagra, reported as occurring in parts of Spain, where corn is neither grown nor eaten, but Italian pellagrolologists refuse to accept this as undoubted pellagra until it is further investigated.

Is pellagra a morbid entity or do we include under this term more than one morbid entity? These suspicions have very naturally been engendered by the question of pseudo-pellagra. The disease is so characteristic and so consistent in its phenomena, its evolution, its geographic distribution and even in its morbid anatomy that it must be considered, in my opinion a morbid entity. But, apart from etiologic consideration, if there exist other conditions or states deserving the dignity of the title pseudo-pellagra, as now used by writers on pellagra, the presumption may well be entertained that we are dealing with more than one morbid entity. This is a matter of essential importance, and demands the close attention of all students of pellagra. A British writer has recently expressed the opinion that sprue and pellagra are identical diseases.

The characteristics outlined above,

uncertain as they are in part and incomplete as they are in their entirety do not permit of important inferences. The need for more complete and more accurate and detailed epidemiologic data is too evident for comment. Such studies at present are of paramount importance. Furthermore, it would also seem unwise to base theories on epidemiological data collected in only one country. While accurate data of this nature do not exist for the United States there is nevertheless, as above pointed out, very good reason to believe that in many essential points pellagra in this country differs from that of Europe. Until wider studies are made the epidemiology of American pellagra is of course uncertain, but it must even now be taken into some consideration.

As for further inferences, it is interesting to note that from these data there is some analogy between beriberi and pellagra and in both diseases there are analogous etiologic theories. At present however, the rice theory of the cause of beriberi can certainly present a far stronger claim for acceptance than can the maize theory of the cause of pellagra. The

data are too incomplete really to justify any conclusions of great consequence.

I can not conclude this paper without some expression of the great need which exists in the United States for more complete information regarding the prevalence of pellagra. The disease is not reportable, and the number of cases among us is unknown. Such information must come largely from the individual practitioner and it is to be hoped that the importance of reporting pellagra may not be overlooked.

Epidemiologic observations are likewise of importance and worthy of careful attention by those who come into contact with individual cases.

Finally, I acknowledge my indebtedness to the general literature of pellagra, but it is not feasible to give individual references. The observations recorded have been collected from too many sources.

It is hoped that under the direction of the Surgeon General of the service this paper may soon be supplemented by more detailed studies of the epidemiology of this disease.—Public Health Reports.

Surgery of the Stomach

C. B. Lyman, M. D.

Prof. Surgery, University of Colorado, Denver.

Read before the Thirtieth Annual Session New Mexico Medical Society, Las Vegas,
N. M., September 6-9, 1911.

The stomach is a very much abused organ, probably none in the body has received so much needless treatment or has furnished us with so many honest and dishonest quacks, men who cannot see beyond the actual subjective symptoms of the patient and who do not realize that the stomach symptoms are, as one writer put it, like the ringing of a fire alarm bell which does not always give the location of the fire.

The stomach has a double function, first chemical and second mechanical. Interference with the last may secondarily bring about alteration in the first. It is the latter which is upset by pathologic conditions in various other organs producing in many of the cases a spasm of the pylorus which prevents proper drainage of the stomach, a backing up of digested and undigested food, fermentation and consequent derangement of the chemical activity of the gastric juice, hyperacidity hypersecretion and the chain of symptoms simulating gastric ulcer and often mistaken for symptoms of such a condition. A recent case of mine demonstrated to a nicety such a state of affairs; the patient, a man aged 46 had been under the observation of one of our best medical men for three years and a diagnosis was made of gastric ulcer, and surgical consultation was

advised. There was a point of localized tenderness too low down to be explained on the ulcer theory; especially as there was no marked stomach symptoms and those present were erratic and bore no fixed relations to meals or time of day and I added chronic appendicitis as a probable cause of the symptoms. Operation was done and a chronically inflamed appendix was removed. The pylorus was somewhat hardened and admitted the tip of the index finger only, and that nothing might be left undone to relieve the symptoms, a posterior gastro-enterostomy was made to secure proper drainage thereby offering relief to irritation of food to the pyloric spasm.

The man was a bleeder and had considerable oozing of blood into the stomach during the few hours following the operation; consequently I opened up the abdomen at the end of three and a half hours; instead of undoing the anastomosis I opened the anterior wall of the stomach, thus enabling me to obtain easy access to the anastomotic line making the control of the bleeding easy. At the same time this procedure enabled me to see and explore the pylorus and there was absolutely nothing pathologic at that point except a hyperplasia of the tissue surrounding the pyloric opening which gave one the sensation of scar tissue and which

prevented dilation of the pylorus. We had to do with a chronic pyloric spasm, a reflex from the chronic appendicitis. I have seen a number of cases presumably of this type as all stomach symptoms were relieved upon the removal of a chronically inflamed appendix. I believe that careful investigation of all cases with chronic gastric symptoms would many times show chronic appendicitis, gall-bladder lesions, chronic pancreatitis, renal disease, arteriosclerosis or tabes as the definite cause of the reflex; omental adhesions enteroptosis or gastroptosis may by pulling often be the direct cause of pyloric spasm or kinking of the pylorus, either of which conditions are very likely to give us stomach symptoms.

A theory which is gradually receiving more consideration is this that these various conditions which produce pyloric spasm or pyloric kink are in reality a pre-ulcer stage and should be so regarded by both medical and surgical men when they come to outline a method of treatment. That many of these may be temporarily relieved of these symptoms is true and I often wonder if many of the cures of stomach ulcer recorded by Medical men might not have been in realty cases of pyloric spasm which had been relieved by long continued rest in bed, the tugging of adhesions or reflex irritation for the time being having been done away with.

From what I have said I would not have you think that I believe all patients with stomach symptoms are free from local pathologic lesions. It is hard to get at statistics on the subject which are of much value as the personal equation of the operator enters so largely into the compilation of figures, but taking the figures of various observers in an unbiased way it seems likely that about 75 per cent of people suffering from chronic

gastric symptoms have as a cause definite pathologic lesions in the stomach and when I say in the stomach I do not mean the anatomical stomach extending from the cardiac orifice to the pylorus but the physiological stomach which extends down to the opening of the common bile duct into the duodenum; the duodenum is in reality physiologically a part of the stomach and should be so considered in all of our investigations.

There are practically only two pathologic conditions which demand our consideration:—ulcer and cancer; we may look upon these conditions as different stages of the same pathologic process, for it has been demonstrated at the Mayo Clinic and elsewhere that in 75 per cent of the cases of gastric cancer coming to the operating table a definite history of a pre-cancer stage is obtainable. It has been my pleasure recently to spend a few days in Rochester and while there I followed a number of resected stomachs through the laboratory and in a number of them where the gross appearances were those of simple ulcer there were found isolated nests of cancer cells at some distance from the edge of the ulcer, which demonstrated the fallacy of our previous ideas that cancer, when it attacked an ulcer, usually made its first appearance either in the base or at the edge of the ulcer.

In the consideration of ulcer of the stomach we must divide cases both clinically and therapeutically into two classes; the acute and the chronic. The acute are usually toxic in origin and are quite likely to be multiple, the patient either dies or recovers in a short time. The prevailing idea is that acute ulcer is distinctly a medical condition and that surgery plays but little part in its treatment, and that acute ulcer with hemorrhage should not be operated upon. That there is an opportunity for difference of opinion

on this subject I believe to be true, but where to make the dividing line is the question. I have operated acute cases with severe hemorrhage where death seemed imminent and had them recover. I am inclined to leave these cases to the care of the Medical Man unless death seems quite the most likely result under such care.

Chronic ulcer on the other hand is the class which interests the surgeon most. When I speak of gastric ulcer I mean any ulcer existing either in the duodenum, at the pylorus, or on the gastric side of the pyloric ulcer. In chronic gastric ulcer we are now going through the same experience as we did with the appendix, until within the last few years physicians were divided on the question of medical or surgical treatment of appendicitis; today it is classed as a surgical disease. Today we find the profession equally divided on the treatment of chronic gastric ulcer. Some believe that it is strictly a medical condition and the patient is subjected to various kinds of diet, stomach washing, rest in bed and drugs without number with the same ultimate result in almost all cases—no permanent relief to the patient but a constant addition to the physicians bank account. Another class are willing to admit that when these patients fail to obtain relief after a reasonable length of time they should be turned over to the surgeon. We have still a third class, limited in number, who believe that as soon as a diagnosis is made operation should be done, they are perhaps over enthusiastic and class all cases as ulcer that have ulcer symptoms, not recognizing the facts stated in the beginning of the paper, relative to the subject of stomach reflexes. Medical men have had many years in which to formulate a line of treatment which would cure these conditions and have failed.

Surgeons have hardly had a fair show but in the limited time at their command have demonstrated the fact that surgery cures where medicine fails. Some say: what will be the end results in these operated cases? In reply we may say that our work in this line has been going on for about ten years, that the technique has improved and that most of the cases operated upon several years ago are in good health today and have not suffered a return of symptoms. Some Medical men say our mortality is too high; that might have been said of us a few years ago but the mortality rate has been constantly lowered until today, in the hands of those with experience in this particular line of work, it is not much above that seen in operations for the removal of the appendix. We must admit that there are errors on both sides, there are medical men who are too conservative, surgeons who are too radical, but such must necessarily be the situation during a transition period. The time will come when our ideas will settle down to a reasonable and sane basis.

All this brings us to the consideration of two questions: upon what shall we base a diagnosis of ulcer and a diagnosis having been made when shall we operate and what operation shall we do. We must all admit that there are many mistakes made in diagnosis of conditions having epigastric symptoms, though there are not so many made today as formerly. I have in mind a case seen 8 years ago where the diagnosis of ulcer was made by ten men in the U. S. some of them so-called "stomach specialists", finally an operation showed a stone in the common duct. With our added experience I do not think the mistake would have been made today. One must rely in a large measure upon the clinical history; laboratory findings in the examination of the stomach

contents, upon which so much stress was formerly laid, now occupy a minor place in the picture of this disease. If we eliminate the presence of free blood in the stomach contents we have nothing which one would call characteristic, occult blood is of uncertain origin, hyperacidity means little, diminished acidity or absence of free acid likewise means little, they are all suggestive but not pathognomic. Deaver says: "our failure to diagnose cancer early was due to our reliance on test meals, etc."

Hyperacidity, hypersecretion, pain in the pit of the stomach one to three hours after meals, burning sensations and eructation of sour or bitter fluid from an empty stomach, pain at night and at a similar time each night usually means ulcer. In 30 per cent of the cases vomiting of blood occurs and is almost pathognomic, vomiting after each meal followed by temporary relief to pain usually indicates the presence of an ulcer at the pylorus or on the gastric side of the orifice. Disorganized food in the stools if accompanied by the symptoms already enumerated suggest to a large degree of certainty an ulcer on the duodenal side of the pylorus. Retention of food in the stomach with dilation of the stomach indicate pyloric obstruction: These symptoms alone or even if accompanied by a mild degree of hyperacidity might be caused by chronic pyloric spasm without ulcer but even under such circumstances they belong to the operative class.

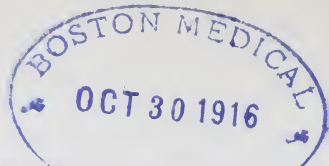
Some of our cases have been doomed to live the rest of their lives without relief because of a diagnosis of cancer had been made owing to the large loss of flesh and cachectic look both easily explained by lack of assimilation due to a dilated stomach with pyloric obstruction.

Many women with chronic ulcer have

been doomed to a life of invalidism on account of the large predominance of neurasthenic or hysterical symptoms. I have seen three cases of this type recently where operation was advised against and were told that operation would make them worse. They were operated and to-day are in perfect health as regards their stomachs and their nervous system. It is not my intention to go into the subject of differential diagnosis, suffice it to say that there are many cases having symptoms simulating ulcer and localized in the epigastric region where a definite diagnosis cannot be made; in such cases an exploration should be made as a means of diagnosis being prepared to do what ever the condition found demand. What the patient wants of us is restoration to health and it cuts but little figure with him what he has as long as he gets rid of it.

All cases of ulcers with pyloric obstruction are definitely subjects for operation for at that stage we have a mechanical condition to deal with. Chronic ulcers with hemorrhage should all be operated on for when hemorrhage takes place it indicates extension of the ulcer to a considerable depth. A recent case of this kind showed the open end of a small arteriole presenting in the base of an ulcer which had extended so deep that there was nothing left at the base but the thin peritoneum which ruptured upon delivering the stomach through the abdominal wound. This particular case demonstrated another fact namely that an examination of the stomach contents is not always desirable for perforation would most certainly be the result here had a stomach tube been introduced.

All ulcer cases should be operated upon where the patient has been subject to a course of medical treatment and has received no relief or if temporary relief has been obtained and there has been a



return of symptoms. Cases of this character are quite likely to develop cancerous degeneration if the condition is not relieved. Some observers go so far as to say that chronic ulcers never heal unless operation be done to secure drainage and relief to irritation.

Early operation is advised as a preventative measure in the development of cancer; for as has been stated 75 per cent of the cases of cancer have a previous history of ulcer.

McCarthy says "with our present means of diagnosis it is impossible to say that a gastric ulcer is not malignant." He is also of the opinion that some of the cases of ulcers were not primarily ulcer but that we have an ulceration of an already existing carcinoma.

When operation is decided upon the question arises what shall be done? This question must of necessity be decided at the time of operation. Two things are always to be considered, first and most important the establishment of thorough drainage of the stomach and second the advisability of removing the ulcer bearing area. The tendency at the present time is to remove the ulcer if it is at all indurated and it can be done without endangering the patient's life too much. Saddle ulcer on the lesser curvature can be easily removed by taking out a wedge shaped piece of the anterior and posterior wall of the stomach. The important thing to remember in doing this or any other operation involving removal of a portion of the stomach wall is that such an operation interferes with the future motility of the stomach and that removal of the ulcer must be accompanied by a gastro-enterostomy to secure perfect stomach drainage. Indurated ulcer at the pylorus should have a resection of the pylorus done if possible, closing entirely the end of the duodenum and the cut

end of the stomach followed by an anastomosis between the pouch of the stomach and the jejunum as in the manner of the ordinary posterior gastro-enterostomy. Resection of the pylorus is not a difficult operation to do provided it is done with a thorough knowledge of the blood and lymphatic supply. Every operator has his own method; the method of W. J. Mayo as described in an article published in the Journal of the Am. Med. Association May 14, 1910, appeals to me as the best and is the one I am using.

Duodenal ulcers do not demand excision owing to the fact that they seldom if ever undergo cancerous change which is the only reason for doing a resection. Chronic ulcers in the early stage are those in which repair has taken place and there is nothing left but scar tissue which has brought about a pyloric constriction do not demand an excision and all that is necessary to do is to provide free drainage for the stomach; this can be accomplished by a plastic operation on the pylorus which will enlarge and lower the lower border of the pylorus or by an anastomosis between the anterior and posterior wall of the stomach and the jejunum. The latter method is preferable and is the choice today using a short loop of the jejunum and making the anastomosis through the mesentery of the transverse colon. Occasionally one may encounter, as I have done, a case where the mesocolon is so short that there is no room through which to do the anastomosis in which case one must do the anterior operation using a long loop of the jejunum so as not to construct the transverse colon. Many men have devised methods of their own but in a general way one can lay it down as a good surgical axiom that the simpler one's methods and the shorter the operation the less the shock and the speedier the recovery.

There are several things which combine to give us good results. First absolute control of hemorrhage or one may be obliged to do a second operation within a few hours for its control; this happened to me last month, and the method used I found very satisfactory and rapid; the stomach was opened on the anterior wall thus enabling me to secure the bleeding points with ease and without undoing the anastomosis. Second absolute prevention of leaking of the contents of either the stomach or intestine, this can be accomplished by careful attention to suturing. Some use cromacized catgut I have always used iron-dyed linen throughout and have never seen any bad results from its use. In doing a posterior anastomosis a short loop should always be used; the opening in the gut should be at a point directly opposite the mesenteric attachment and the opening should be of good size preferably about two and one half inches. A point should be selected in the stomach wall at its most dependent portion at a point comparatively free from blood vessels. The two organs should be so joined that when replaced within the abdominal cavity the direction of the cur-

rent in the stomach will be parallel with and in the same direction as the natural current of the intestine. By observing these simple rules one will not be likely to be bothered by post-operative complications.

The post-operative care of these cases has much to do with the patients comfort and speedy recovery. The patient should be put up on a back-rest upon recovery from the anaesthetic thus securing good stomach drainage and less liability to vomiting. Nothing should be put into the stomach the first twenty-four hours. Salt solution by the bowel according to Dr. Murphy's method will quench the thirst and give the patient much comfort and secure good kidney activity. Should bile enter the stomach the nausea can be stopped by stomach lavage. Liquid diet can be started in forty-eight hours.

Continual vomiting of bile is fortunately a rare complication but when it does occur a secondary anastomosis between the two loops of the jejunum will be required. This complication has been of less frequent occurrence since the short loop has been substituted for the long one.

Feeding in Typhoid

J. A. Rolls, M. D., Santa Fe, N. M.

Read Before the 30th Annual Session of the New Mexico Medical Society, Las Vegas, N. M., September 6-9, 1911.

Mr. Chairman and Gentlemen:—

I must confess to you at once that I have chosen this somewhat hackneyed subject, not because it is one upon which I flatter myself that I can speak with any degree of authority, but rather on the contrary because it is one that still continues to present to me and I imagine to all of you, many problems that are most difficult of solution.

Upon the occasion of my last visit to the eastern hospitals, I found no aspect of practice upon which there seemed to be a later divergence of opinion than this. The practice varied from the milk and egg albumen regimen of Johns Hopkins, through an almost regular ward tray at the Massachusetts General Hospital, to the super-feeding in at least some of the wards in Bellevue. With so much authority for any method of feeding, it of course, remains for the individual practitioner to choose the one that appeals to his judgment as soundest, but I believe upon the whole that the general trend has been toward a more liberal diet, or at least one of much higher caloric value than was generally in use even a few years ago.

I cannot better sketch the history of this subject than by quoting one paragraph from a paper by W. Coleman, published in the *Journal* some time ago. He says in effect: "In fevers of all kinds,

starvation was the accepted practice for many centuries, and included deprivation from water. In 1835, Graves convinced himself that this course only added to the ravages of the disease the ill effects of starvation, and he recommended toast crumbs, meat broths and jellies to a total of probably not over 300 calories in twenty four hours. The next change came with the teaching of Austin Flint, who popularized the milk diet about 1870. The milk diet remained unchallenged until 1892, since which time there has grown up a school of practitioners who advocate a mixed diet approximating a caloric value of two to three thousand, and some of whom even endeavor to surpass the latter figure."

The reasons which have appealed to me as sufficient to overcome my old prejudice against a liberal diet, are based on both theory and practice. As to the former, I think we are all realizing more and more that typhoid is not at all a local bowel trouble, but a general infection, a bacillæmia, in which there may be a variety of local manifestations such as bronchitis, pneumonia, meningitis, phlebitis, and of course most often, if not always, more or less infiltration of Peyer's patches. The last, however, varies markedly in degree, and is not by any means always in proportion to the intensity of the general infec-

tion. When one has accustomed one's self to think of typhoid as a bacillemia, then in thinking of curative measures one of the great desiderata naturally becomes the maintenance of the patient's vitality, and hence the appropriateness and necessity of a diet of high caloric value. In other words, I think it was largely the idea that typhoid was a local bowel trouble that was responsible for the fear of giving food, and that conversely it is the knowledge that the intestinal involvement is only an incident in the course of a general infection that has led to the doctrine that these patients should be well nourished. It may here be stated that the advocates of a liberal diet are everywhere claiming that even in respect to the local bowel trouble, the fuller feeding has neither increased the percentage of hemorrhages or perforations and that any fears that it would do so have been quite unfounded. Apparently the bowel profits by the condition of high vitality engendered, as well as does the rest of the body, and resistance to necrosis is greater, and repair of lost tissue more rapid than when a condition of asthenia is allowed to develop. The practical aspect of the matter is that typhoids, in at least the majority of cases, can take food to the value of at least 2500 calories per diem without harm even as stated to the local intestinal condition, and with the greatest benefit as far as general condition is concerned.

The records of Bellevue Hospital in New York, and Massachusetts General in Boston, have, I think, demonstrated that the theory is correct in the main, because they show that at least the mortality is not increased, for if this be granted then the enormous value of the fuller feeding is seen in the fact that the patients lose an average of five to ten pounds instead of forty to fifty; their convalescence is appreciably shortened, they return to work

at an earlier date, and the danger of intercurrent infections is much lessened. Anyone who has observed the large number of cases in which a quiescent tubercular condition will become active during the time when a patient's vitality is so greatly lowered after typhoid, will realize the value of this last point.

Accepting Voit's standard in preference to Chittenden's, we may say that a 150 pound patient should have food to the value of 2000 calories to keep his resistance to disease and his vital energy at a point where the most successful fight against infection can be waged. If this be true in health, it is probable that fully 3000 calories are required to make up for the very rapid katabolic processes that occur in such a fever as typhoid.

The question is then, how can this food be given with the greatest safety and with the least tax upon the digestive apparatus of the patient, and practically how can it be made palatable. I am convinced that the best way is by a mixed diet composed of milk, cream, including ice cream, a little arrow root, sago, tapioca or oatmeal, (best in the form of gruel), sugar, (and especially sugar of milk,) toast, eggs, gelatine and tender meats, and in suitable cases, alcohol; but, and here is the crucial point, this food must be taken after the advice of Chittenden, that is, each mouthful should be chewed until the tongue cannot detect a solid particle before it is swallowed. An objection often urged is that the mouth and tongue are so dry that the salivary secretions so scanty that the average patient cannot chew his food in typhoid. I believe that in the majority of cases the reason for this is that the proper treatment is not instituted early enough. In many cases during the few days that elapse before a positive diagnosis has been made, the patient has not been urged to chew any so-called solid

food, and the salivary glands have become sluggish. Often at this stage, a nurse has not yet been employed, and the tongue has become coated and the mouth dry from lack of care. It is, of course, much more difficult to get such a patient to eat than it would have been had the proper dietetic regimen been instituted from the first. A point I wish to emphasize here is the necessity of keeping a record of the caloric value of each day's food, and the ease with which it can be done. I make a point of having not only the articles of food eaten, but the exact quantity of each, set down every four hours on the chart, just as the temperature and pulse are set down, and I find that most nurses today can total up the food value in calories at the end of twenty-four hours in about five minutes. Hearing at the bedside a verbal account of what the patient has taken the day before, very often gives the impression that he had had about enough food, but I have surprised myself on several occasions by totalling this up, and finding that the patient had in reality not got food to the value of over seven or eight hundred calories. I believe that general directions about the food in typhoid are fully as unscientific as it would be to prescribe a potent drug and advise the patient to take a little of the mixture every once in awhile.

I think there is a misconception in regard to the so-called solid foods, and that the advocates of a fluid diet are apt to think of milk as they see it, and not as it really becomes soon after entering the stomach. There it curdles into a semi-solid mass of proteids, carbohydrates and fats, and as a matter of fact if bread, oatmeal, sugar, tender meats, etc., be properly masticated, they also are found in the stomach in the same physical state and having a higher caloric value and less residue per bulk swallowed than has milk.

I have had difficulty in many cases in following out this dietetic treatment. A common one has been the disinclination of the patient to take the food. Where this disinclination has not been backed up by signs that it was not agreeing, I have tried to overcome the patient's objections, and have urged the diet as strongly as possible, just as I would urge him to take an unpleasant medicine. A more important objection has been an actual inability of the patient to digest the food, or the appearance of flatulence or a diarrhoea, (the latter most often from the use of too much fat.) When such has been the case, one must withdraw food wholly or partially for a time, and begin again more cautiously when the objectionable symptoms have disappeared. Another great objection has been that the patients who needed the food most, that is, the severe toxic cases, have been just the ones that have been able to take the least, but even here I think that the effect of a sufficient quantity of food, of which in this type of cases alcohol should form an important part, may so fortify the patient that he never sinks to that low condition where food may no longer be given, or if he does, he may have gotten sufficient vitality to carry him through.

I feel, Mr. Chairman, that the nature of this subject has made my remarks so rambling and disjointed that if I have time, I should like to set down a few practical conclusions that to a large extent guide me in my conduct of a case of typhoid.

In the first place I think it very important to inaugurate the dietetic treatment by thoroughly sweeping out the intestinal tract with castor oil or calomel, supplemented by high colonic flushings. This procedure will free the bowel from the residue of former dietetic errors, and if used early lessen to a marked degree

the primary repugnance to food, and certainly lessens the initial fever.

It is important from the first day to take scrupulous care of the mouth and tongue, and if it is thought wise to withhold food for a day or two, at least to allow the patient to chew gum so as to keep the salivary glands in a condition of normal activity.

The physical condition in which the food goes into the stomach is more important than the exact selection of the diet, and thoroughly masticated and en-salivated bread and butter is probably as

acceptable to the stomach and bowel as curdled milk.

As to the main proposition, starting with practically no food at all, we have advanced through the semi-starvation of Graves' regimen, through the exclusive milk diet period, and have now reached a point where we argue that since typhoid is a bacillema we think the patient should be well nourished, and so far there is no apparent indication that the pendulum has swung beyond the center of truth.



FEST'S OPERATION FOR THE CURE OF ENURESIS IN THE FEMALE, WITH THE REPORT OF A CASE.

Edwin B. Shaw, A. M., M. D., Las Vegas, N. M.

Read before the 30th Annual Session of the New Mexico Medical Society, Las Vegas, N. M., September 6-9, 1911.

Enuresis is a troublesome condition, one influenced little if any by drugs, but in the majority of cases with age and general development disappears.

However, there are cases as age advances in which the condition tends to increase rather than diminish, owing probably to hypertony of the bladder walls and atony of the urethra. Mechanical support of the urethra will help to educate the hypertonic bladder, the very thing the operation about to be described seems to accomplish.

Fest's first paper, (*Der Frauenarzt*, May, '95) discusses the mechanical dilatation of the female urethra following the removal of calculi and consequent incontinence which frequently results. The complicated methods of Duret, Gersney, and Pousson, for the cure of this incontinence are described. Comparing these methods, Fest describes his own, which he first carried out successfully in a woman of 34, suffering from incontinence after the removal of the calculus. Later Fest reported a number of cases of enuresis in children both of nocturnal and diurnal type operated by this method, all of which proved successful.

Blech reported in the *Medical Record*, 1895, a successful operation for enuresis nocturna, in a girl of 14.

D. Tod Gilliam, of Columbus, also re-

ported several cases of incontinence, operated after the Fest principle.

The origin of incontinence is generally unknown, and in absence of such recognized factors as: epilepsy, acid diathesis, calculi and local lesions, we are justified in considering enuresis an essential manifestation. Many of these cases show a decided neurotic heredity. The children are nervous, and often the bladders show so little resistance to the slightest stimulus even in daytime that voiding of urine becomes imperative, voluntary inhibition is suspended, and we have then to deal with diurnal incontinence. The only explanation possible is by accepting the theory of hypertony which leads to a weakened motor inhibition. The syndrome of motor debility indicates an anomaly in the functions of the pyramidal system which is either insufficiently developed or improperly adapted. This would mean a true hypogenesis.

Case:—Jessie K., age 11, a ward of the Children's Home Society, has suffered from nocturnal enuresis all her life, and for several months previous to operation, was unable to retain her urine during the day. This little child was placed in several families, but owing to this disagreeable affliction was returned to the Receiving Home. I treated her for a time with the usual remedies, such as bella-

dona, strychnia, etc., but without benefit. In conversation with Dr. Fest in regard to the case he suggested operation. Accordingly the matter was laid before Dr. Chas E. Lukens, Supt. of the Children's Home, who readily consented to the operation. The case was sent to the Becker Hospital, and operated June 25, 1911. The usual aseptic precautions being observed, the child was anesthetized, ether being used, and a deep incision was made on either side of the meatus urinarus. These incisions should be made as deep as possible. The longitudinal incisions were closed by sutures from above down, which transformed the wounds from vertical to horizontal ones. As will be seen this creates a buttress on either side of the meatus by banking up the tissues so as to close it by making mechanical pressure. Silk-worm gut was the suture material used. There was present in this case an hypertrophied and partially adherent prepuce, which was circumsised.

It is now nearly three months since the operation, with perfect control of the bladder, which seems to establish beyond

all peradventure the efficiency of the operation in this class of cases, and justly entitles it to a place in our text-books of surgery.

Bibliography

Fest, Francis T. B.: Eine neue Operation zue Heilung der Incontinentia Urinae bei Frauen. *Der Frauenarzt*, Berlin, X 193.

Bleeh, G.: Successful Treatment of Enuresis Nocturna by the Fest Operation. *Medical Record*, New York, XLVIII 318.

Gilliam, D. Tod.: An Operation for the Cure of Incontinence in the Female. *The American Journal of Obstetrics*, New York, XXXIII, 561.

Fest, Francis T. B.: An operation for the Cure of Incontinence in the Female. *The American Journal of Obstetrics*, New York, XXXIII, 561.

Fest, Francis T. B.: Operation zuer Heilung der Incontinentia Urinae. *Monatschrift fuer Geburtshuelfe und Gynaekologie*, Berlin, IV 346.

MINUTES OF THE SECOND ANNUAL MEETING OF THE RAILWAY SURGICAL ASSOCIATION OF THE SOUTHWEST

The Association met at the Y. M. C. A. Building, El Paso, Texas, at 10 A. M. Friday, October 20th, 1911, Dr. Angle, President, presiding, Dr. W. L. Brown, Secretary.

The immediate business taken up was the perfecting of the constitution and by-laws, this occupying the session until 12:30. There were several changes made in the copy submitted by the committee that had been appointed to draft the constitution. The meeting then adjourned until 1:30, at which time it re-convened with Dr. Angle in the chair.

The Secretary's report was read at this time, which showed an increase of forty one to fifty three, also that \$21.65 had been received from the New Mexico Association, and while there had been considerable correspondence and printing during the year, necessary to carry on the campaign for new members, there still remained in the treasury \$21.00.

This was followed by the election of officers, resulting in the election of Dr. F. E. Shine, Bisbee, President, Dr. J. W. Colbert, Albuquerque, First Vice President, Dr. Carlos E. Husk, Santa Barbara, Second Vice-President, Dr. H. E. Stevenson, El Paso, Secretary and Treasurer. Drs. S.D. Swope, W.L. Brown and H. F. Bailey

were elected trustees, and they were to draw for one, two and three year terms. This resulted in Dr. S. D. Swope drawing three year term, Dr. W. L. Brown, two year term and H. F. Bailey, one year term.

It was also voted by the Association that the New Mexico Medical Journal be the official organ, and that the dues be raised from one to two dollars, one dollar of which should go towards defraying the expense of printing the papers and transactions in the Journal.

During the last afternoon of the meeting resolutions were adopted, thanking the local members at El Paso for the management of the meeting, the Y. M. C. A. for the use of their hall; also Drs. A. W. Morton, of San Francisco, W. W. Roblee, of Riverside, California, and Fred Englebreckson of Chicago, for the most excellent papers that they read before the Association. Drs. Morton, Roblee and Englebreckson were also made honorary members.

The trustees, Dr. Swope and Dr. Bailey also made a report on the examination of the Secretary's books and accounts and reported them correct.

The next meeting is to be held in El Paso sometime in the fall of 1912, the date to be decided by the officers and board of directors.

Massage in the After Treatment of Injuries

Read Before the 2nd Annual Meeting of the Railway Surgical Association of the Southwest, El Paso, Texas, October 20-21st, 1911.

"Massage" is derived from the Arabic "mass" and a Greek word which means "knead" and may be defined as a systematic mechanical stimulation of the soft tissues of the body by means of certain manipulations viz. effleurage, pertrissage, tapotement and friction.

The use of massage as a therapeutic agent extends into hoary antiquity, and is probably as old as mankind.

It is mentioned and described in the oldest known literature of Asia "Kong Fu" (about 2700 B. C.) and of India in the "Vedas" or books of wisdom. It was practised in ancient Persia, Egypt and Phoenicia.

In Europe massage was studied, practised and taught by such men as Hippocrates (460 B. B.), Asclepiades (128-56 B. C.), Galen (151-201 A. D.) and the great Celsus in the beginning of the Christian period. Further on by Ambroise Pare' (1517-1590), Fiedrich Hoffman (1660-1742), Tissot (1780)). In 1913 Ling founded The Central Gymnastic Institute in Stockholm Sweden. Dr. Mezger of Amsterdam (1860) was a world famous masseur.

Langenbeck, Billroth, Esmarch and others too numerous to mention all followed in the footsteps of the ancients in this respect. In this country the use of massage as a therapeutic agent is prob-

ably more advanced through the efforts of Lee of New York, Weir Mitchell of Philadelphia, Douglas Graham of Boston, than of any other men.

The physiological action of massage is that of mechanical stimulation, and may be divided into cellular and systemic.

The cellular action is in conformity with the physiological law, that when living protoplasm is exposed to external energy, the potential energy in the cell thus exposed, is converted into kinetic energy, and that this activity so produced takes the form of the ordinary function of the cell, that is, metabolism and any special function the cell may be developed to perform.

The cellular action is especially taken advantage of in organic (or special), and in local massage.

The systemic action depends upon the ability to control the circulation and interstitial absorption, increase or reduce the blood supply in any part of the body, by means of massage.

If a systemic treatment can not be given without at the same time influencing the cellular elements manipulated, no special attention is paid to this part in systemic massage.

In special or local treatment more attention is paid to the structure of the tissues in detail, and the cellular ele-

ments come in for more attention collectively than in systemic massage.

While the manipulations in massage are divided into four different kinds, effleurage, petrisage, tapotement and friction, each with a different effect on the structures, these are so imperceptibly blended with each other in a treatment that it is not easy to differentiate them.

By effleurage we understand centripetal strokings, with one or both hands, so applied as to conform with the part manipulated. The palmar surface, ulnar or radial margin, thenar or hypothenar eminences, or the base may be used. If both hands are used they may be used simultaneously or alternately. The pressure should vary according to the resistancy of the tissues, but be strong enough to compress them, and the hands should move over the paths of the larger veins and lymphvessels and always in the direction of the current of these. A bland nonirritating fat may be used as a lubricant, to protect the skin from abrasion.

The effect of effleurage is primarily local and superficial, secondarily deep and distal, compressing and emptying centrally the superficial veins, lymphatics and capillaries, driving their contents toward the heart, thus allowing them to be refilled from the more deep and distal vessels, reducing intravascular pressure in these. Repetition of this manipulation at frequent intervals, each time continued for from five to fifteen minutes will prevent and reduce local congestion and stasis.

The manipulations should be commenced on the proximal side of the lesion and gradually each stroking is started nearer until finally this is all covered. In a local acute case, not more than ten minutes should be given at each sitting, but as much as three or four times a day, when practical, is of value. In chronic cases the treatment may last longer and

the intervals may be extended.

For the directly affected area, if very painful, a more sedative manipulation may be used, which is alternate compression and relaxation with one or both hands. The pressure should at first be slow and gentle, later firm, deep and synchronous with the heartbeats. This acts as an extra heart in the region subjected to the treatment, the valves of the vessels insuring the current of the fluids in the right direction.

It must be evident that this way of "handling" all simple inflammations in a more or less acute stage, as ecchymosis, distortions, reduced luxations, simple traumatic synovitis, bursitis and tenovaginitis does terminate a pathological condition of this character in shorter time than any other means that may be employed.

It is of importance to remember that the earlier after the injury the treatment is started the better, as extravasation and organization of the extravasated substances is prevented, and often an inflammation which would otherwise set in may be entirely aborted, owing to the prevention of stasis.

Due to the improved circulation thus maintained, the facilities will be greater for carrying off the debris of broken down structures and for better supply of nutrition and reconstructive material. This will insure an improved function of the cellular elements and promote a more rapid healing of a lesion with the least possible cicatrization.

Thus effleurage is indicated in such injuries of any tissue, where due to poor circulation or disturbed nutrition from any cause, the healing of the lesion does not proceed in the normal manner, and it may for the same reasons prevent bedsores and senile gangrene.

Petrissage: In this manipulation we

grasp a large mass of muscles in one or both hands, pinch, roll and knead all through this until every part of it is worked through.

The action is first like that of effleurage, but is more concentrated and reaches deeper, producing alternate contraction and relaxation of the muscle fibers thereby emptying into the capillaries and lymphatics the waste products of metabolism, reducing the resistance to the arterial blood current, which thereby is enabled to flush the part with a new supply of oxygen and nutrient elements. In addition to this, the rolling and kneading of the structures tends to break down any organized infiltration and acts as a direct stimulant on the cellular elements and metabolism.

Petrissage is of special value in muscular infiltration due to non-infective inflammation, in malnutrition due to inactivity and to remove the products of *subdued* infectious inflammation. In systemic massage it reduces the peripheral resistance to the heart and is for this reason very valuable in all conditions of a failing compensation or when this is threatened.

Tapotement consists of blows, raps or choppings given with one or both hands, by the palm or ulnar edge, the tips of one or more fingers, the dorsal part of the fingers with hand closed, or the ulnar margin of the little finger with all the fingers spread apart.

This is the most stimulating manipulation of massage, the skin and peripheral nerve endings are best reached by slapping of the flat hand, the nerve trunks by a rapid percussion with the finger tips, and the muscles by choppings made by the ulnar margin of both hands alternately and transversely to the long axis of the muscles.

Friction indicates short-range excursions over the tissues, performed with the

volar surface of the distal phalanx of the thumb or three middle fingers and executed with the greatest possible pressure.

The object is to, by excessive pressure, produce fatty degeneration in local hyperplasias, organized exudations and infiltrations, and force the refuse from these into the surrounding lymph channels.

From what is stated so far, the indications for massage in the aftertreatment of injuries should not be difficult to determine.

The scope of this paper, does not permit me to go into detail, but I will briefly indicate some instances where massage may reduce suffering, shorten time of invalidism and often insure a more perfect recovery than by any other known means.

Systemic massage is of value in all cases where the patient is unable to indulge in his customary activities, as in convalescence, senility, paralysis, threatening of or actually failing compensation and in all bed-ridden patients from any cause—except in contra-indicated—and the treatments should be given once daily.

Local massage is indicated in all sprains and contusions as soon a fracture or other contra-indications can be excluded, it is more effective the earlier after the injury it is commenced and should be given not less than once daily, two to four times a day the first two or three days, if practical, is of great advantage.

In all luxations it is indicated, (together with passive movements within the range of the joint) as soon as reduction is accomplished and should be given as frequently as for sprains.

After fractures, if not complicated, it may be given once daily after the final removal of the dressing. If the fracture is near by, or involves the function of a joint, the massage should be given as soon

as possible without danger of disturbing the apposition of the fragments, one to four weeks after fixation, depending on the experience and ability of the masseur. Passive movements of the joint involved should be commenced as soon as the agglutination of the fragments will permit without disturbing the apposition.

In nonunion of fractures massage will in most cases affect a solid union, but in old cases the fragments should be rubbed against each other under anaesthesia first, and then local massage daily as soon as it can be done without interfering with the apposition.

In faulty or vicious union (where operative measures are impractical) daily treatment of massage and movements, if intelligently given and persisted in, the function may often be fully restored, and will always be somewhat improved by this means.

All ankyloses, not due to new-formed bony obstruction or a destroyed synovial membrane will be corrected by means of local massage and movements.

Inflammatory sequelae, such as infiltration, adhesions, contractures, cicatrices will be absorbed under massage. Even cicatrices from burns where part of the epidermis is destroyed, may be rendered

less prominent by persistent treatment of this kind.

Whereever any of the conditions mentioned here interferes with the nerve or blood supply, local massage is indicated and has proved beneficial in restoring function, correct atrophy, and also paralysis of the peripheral nerves.

But in order to obtain the desired result in such conditions, the treatment must be applied intelligently, based on a correct understanding of the anatomical, physical and pathological facts in the case, and the contra-indications must not be forgotten.

Contraindications for systemic massage is any acute systemic infection. A local infection prevents massage in the locality affected.

In abrasions, wounds and ulcers local massage may be given if perfect aseptic precautions are maintained.

Local massage must not be given in the vicinity of local infections of any kind, malignant tumors, varicose veins, aneurism thrombus of recent origin, hernia if strangulated, foreign bodies, luxations if not reduced, unhealed fractures, with modifications as indicated before.

FRED ENGELBRECKSON

140 N. State St., Chicago, Ill.

The Railway Surgeon in the Role of Railway Economics.

By Dr. G. K. Angle, Silver City, N. M.

President's Address delivered before the 2nd Annual Session of the Railway Surgical Association of the Southwest, El Paso, Oct. 20-21, 1911.

Every good servant is anxious and willing to give the very best service to his employer that is possible, moreover he is ever interested in the success of his employer's business. There is no other excuse for the birth of the Southwestern Railway Surgeon's Association, and with this apology I approach the subject of these remarks.

Granting that the average man is endowed with the average intelligence, his service to society will be in direct ratio to the standard of health he enjoys, therefore if the railway employees health can be raised so many units, his service is going to be that more valuable.

This hypothesis certainly can not be denied as applied to office forces, and I believe that it is equally true and more so to those in the train service, an office man with good digestion and who is in tip top condition every morning he comes to work is going to turn out a larger volume of work and that work is going to be more accurate, and the accuracy of one employee makes it possible for all the other employees to get on with their work with dispatch and precision. On the other hand the blundering clerk may cause all the wheels of progress to stop and the accomplishments of a day become one hard grind to all, all are interdependent one on the other. The ultimate result of one

or more weak units in the office mechanism of Railway management may be the primal cause of many a nervous wreck that is so often found among the brightest minds after but a few years of most valuable service to the Company.

A roundhouse employee who comes to work in the morning after a night's debauch or who from no fault of his own may not be observing the proper hygiene of houseliving and diet develops a constant mild auto-intoxication, he becomes sluggish of mind and indifferent to the work about him, will not and can not give the best of service. If he happens to be an engine inspector he may overlook some minor defect and later, out on the road some trivial accident has happened and traffic is delayed or possibly worse a serious wreck has occurred causing the loss of many thousand dollars and many human lives. How valuable a good eye and keep perceptive and conceptive faculties are on the part of the car inspector, as the mile-a-minute trains roll into the station for a five-minute stop and off again with a half-thousand souls on board—and the train crew who have charge of a thousand tons of freight and a hundred thousand dollars worth of rolling stock, consider their responsibility and the importance of having keenest mental and fullest physical activities. If they are

in the best of physical condition they are not so liable to be found in the caboose lolling on cheap upholstery of straw and leather. If they are in fine fettle, they are more likely to be found out on top of their train watching for any possible defect in the very nick of time rather than be apprised of that defect by the occurrence of a twenty-thousand dollar wreck. I sometimes think it is not so much the over ten hour service that is responsible for many railway disasters and loss of human lives as it is a certain undertone of health, which in many instances with the co-operation of the Railway Officials would be amenable to modern medicine.

One passenger crew of dyspeptics on one trip will drive away more business than a half-dozen live city-passenger agents can drum up in a month.

The Application

How then may the Railway Surgeon be of more real use in the Railway service? First of all Railway Managements must be convinced of the practicality and the harmonization of the best of health with the best of service and then must provide ways and means of bringing this about. They must take the initiative, we may only hint at the possibilities and offer suggestions. I am of the opinion that all railway employees whose duties may have to do with the operating of trains out on the Road and as well those whose business it may be to keep all rolling stock in proper order should pass inspection by Company Surgeons at fixed intervals and all necessary medicine furnished by the Company. Surgeons must be conscientious and painstaking to observe even the slightest departure from normal standards that preventative medicine may have its greatest force, that wise suggestion as to habits of life and diet, non-conducive to the best of health may be observed early before they have practically despoiled the

body of a goodly percent of its normal efficiency.

The small class of men, who would not willingly and cheerfully accept such advice would necessarily be of such vicious temperament that the needs of modern railway service would ask for their resignations.

Railway employees in the train service and allied branches should be required to pass special physical examinations of the most rigid sort, before entering the service and regularly thereafter at fixed intervals. It suggests itself to me that it would be proper to divide these men into First, Second and Third-class trainmen, and to require an examination for promotion as obtains in Military service. Failure to pass a fixed standard to bar from promotion, and falling below a fixed standard to relieve from the service.

Caboose sleeping and cooking should be tabooed and flatly prohibited where not absolutely necessary. Good and proper food as well as well ventilated sleeping apartments should be provided by the company where any considerable number of men have to lay over. Of course all these innovations would add to the already complex management of Railroads, but I believe that the scheme is perfectly sane, worthy of a fair trial, and in the near future bound to come in evolution of Railway operation. I am persuaded that uniform good health of all Railway employees from President down to Laborer is the greatest asset any Railway can have and an important factor in the conservation of human life, and in-so-far as Medicine is able to bring this about, so far can the Railway physicians and Surgeons make themselves indispensable to efficient railway operation.

Let the Railway Surgeon not only qualify himself that he shall be able to render the best surgical service in railway

accidents and as well be an intelligent adviser in cases of bodily injury, keen to detect malingering. All these have made him worth while in past, but the future, with its scientific advancement along economic questions, is going to give him something more to do and Medicine is going to be as vital a question in railway economics as it is today in building the Panama Canal.

I may not enter the Psychology of Railway management with any assurance that I shall be entitled to a respectful hearing or even a gentle assent from the Powers that be. It would take a Munsterberg to do that and possibly many others of parallel scholarship, and yet I am going to suggest that it is not beyond the realm of possibilities that the genesis of the modern strike may have its origin in certain departures from normal standards of health. We all know that the so-called dyspeptic imagines all, feels all, has all, is all that is damnable in life. They furnish most fertile fields for the seeds of

discontent and anarchy, conditions which are impossible among men, who are enjoying that degree of good health that The Almighty intended they should have and from which they have become aliens thro' no fault of theirs in many cases, and which it is our bounden duty to alleviate as a simple duty to our fellowman and a practical one to the company whose servants we are. Let the Association keep ever in mind the possibilities of Modern Medicine and ever take the lead in what someday will be regarded as very practical tho' now it may seem to all of us at least unconventional, if not chimerical.

We hear of conservation nowadays of forests, or lands, of water, of horses and cattle. Let us bend our minds and hearts to the conservation of the Railway man and in so doing in a measure conserve the lives and homes of the millions, who today travel on our railways, and make the Railway Surgical Association of the Southwest a Pioneer in the New Field of Railway Surgery.



BOOK REVIEW

NOSTRUMS AND QUACKERY. Based on articles on the Nostrum Evil and Quackery in *THE JOURNAL* of the American Medical Association, with additions and elaborations. Part I, Quackery. Part II, Nostrums. Part III, Miscellaneous. First Edition. Cloth. Price \$1; with individual's name on cover, 25 cents extra. Pp 509, with 220 illustrations. Chicago: American Medical Association, 535 Dearborn Avenue.

Every physician whose patients ask for information regarding the efficacy of certain "patent medicines," advertising specialists or other quack treatments, and every layman who desires information on the same subjects, will find "Nostrums and Quackery" an invaluable volume. This means that practically all the medical men and a large portion of the public have use for a book of this kind. In the last few years *THE JOURNAL* of the American Medical Association has published a number of articles dealing with the "patent medicine" evil and quackery. The book "Nostrums and Quackery" contains all such articles, elaborated in many cases and embellished with numerous illustrations, while in addition it contains some matter never before published.

The articles in the book do not deal with generalities. They are specific and to the point; they call a spade a spade. The investigations have been made with a thoroughness that leaves the reader in no doubt as to the fraudulence of the quacks' claims or the worthlessness of of many "patent medicines." Furthermore, the statements are authoritative, for

it is evident that the Association could not afford to speak as plainly as it does if it were not absolutely sure of the facts. In many instances chemical analyses, made in the Association laboratory are given.

The book consists of three parts, Part I devoted to quackery, Part II to nostrums, and part III to miscellaneous subjects. These parts are again divided. Under Quackery, for example, we find sections devoted to "Advertising Specialists," "Cancer Cures," "Consumption Cures," "Female Weakness Cures," "Medical Institutes," and other concerns of a similar nature. Under Nostrums there are sections devoted to "Asthma Cures," "Cough Medicines," "Hair Dyes," "Laxatives," "Obesity Cures," "Rheumatism Cures," and other typical nostrum groups. In the miscellaneous section there are discussed such subjects as "The American College of Mechano-Therapy," "Patent Medicine Maker and the Press," "Molding Opinion in Food Preservatives," and others of equal interest and importance. In fact, the book is not only a vade mecum on the nostrum evil but a veritable "Who's Who" in quackdom.

"Nostrums and Quackery" is published primarily to enlighten the public regarding fakes and fakers. It is a duty of every physician to see that his patients become familiar with the contents of this book. The Association is prepared to furnish it in quantities at a very low figure; it also supplies a copy intended for use in the reception room, with the physician's name printed thereon.

The New Mexico Medical Journal

Volume VII

DECEMBER, 1911

No. 3

E · D · I · T · O · R · I · A · L

At the annual meeting of the New Mexico Medical Society in Roswell in September 1909 the New Mexico Society for the Study and prevention of Tuberculosis was organized. The workers in the field of tuberculosis had long recognized the need of such an organization but the time for its birth had never seemed opportune. With the gradual growth of the medical profession and the increasing influx of tuberculous invalids the urgent needs of such a society were manifest. Hence its inception.

The aim and ambition of the society have been and are to aid in the fight against and the control of tuberculosis. With this end in view the organization stands for the passage of certain forms of legislation which shall effectually control the disinfection of hotels, boarding houses and public conveyances; laws which shall prohibit street expectoration; statutes which shall make registration of consumptives a necessity; legislation regulating the influx of the indigent consumptive to our borders. In addition the association urges the formation of local societies to be affiliated with the state organization which working in unison can effectually direct a campaign of education and reform for the benefit of all humanity. With a local society in every city and village in our state the widest possible educational

campaign can be waged through co-operation with our schools and churches.

To aid the society by your membership and your willingness to help is your duty to yourself, your neighbor and most of all to those closest to you—your family. You have children, babies not yet out of swaddling clothes who are the easiest of victims of tuberculosis and yet not a hand is raised or a word uttered to protect them from the deadly plague. No state in the union has such disgraceful laws, or rather lack of laws, for the protection of the public health.

Picture to yourself the dying consumptive on his way in quest of health, carelessly expectorating and scattering broadcast millions of tubercle bacilli and then on the morrow you take your wife and children and occupy this same germ laden car because your state laws do not compel your railroads to disinfect properly. Just so with your hotels and boarding houses. Some with an outward show of decency claim not to harbor consumptives, but this, my friends, is only applicable to the man who has the stamp of death sealed on his countenance. The one who looks well and can put on the appearance of health is welcomed with open arms and yet he may be dangerous from a health standpoint as the unfortunate individ-

ual who needs but a gentle shove to send him into the great beyond.

And again the vicious consumptive who expectorates upon the walks and into the streets is no better than the prisoner condemned to the electric chair or the gallows. Sometime I believe him worse for instead of being the slayer of one victim he kills hundreds. Place him in the death chamber side by side with the vilest of blood thirsty wretches and I will award him a medal for causing the greatest sorrow and for slaying the largest number of innocent people. We need laws to protect our homes from such as he, and further more we must have them.

We need legislation compelling the registration of every consumptive in order to make effective proper disinfection of quarters after he has quit-
ted them. Without being unduly harsh and seemingly lacking in the milk of human kindness we must have laws prohibiting the influx of the poor consumptive. New Mexico cannot be the dumping ground for all the sisterhood of states. Let each commonwealth care for her own poor, and in turn let us provide for our own people by starting a fund for a state sanatorium.

These are a few of the needs of our new state and it is the purpose of this society to procure them. But to do this we need help. To be a unit of good we must have financial backing. To get this we must have membership, must have the support of the people. Let us obtain your support at once.

Last year we gave New Mexico her first Red Cross Seal campaign and the results were a disgrace to a civilized community. We received from sales

a little over one hundred and fifty dollars where we should have had five hundred. This year we must do better and to this end we urge each agent to give a little of his time in conscientious effort to make the returns from his section worth while.

Aside from our sociological endeavors we hold an annual meeting with the state medical society and the papers read there are printed in the pages of the state journal. This number contains the transactions for the year 1911.

Do not waste time in wishing us prosperity but help to make us prosperous.

LeRoy S. Peters.

The work of Marcus Patterson at Frimley in England on the employment of auto-inoculation by exercise in tuberculosis has assuredly opened up a new field in the therapeutics of tuberculosis, and one which, if his experience is substantiated by that of others, as it seems likely to be from the reported results of Phillips of Edinburgh and King of the Loomis Sanatorium in this country, will prove a genuine advance in returning tuberculous working people to a life of usefulness.

It was early discovered in Germany that a life of complete inactivity in a sanatorium was a very poor preparation for one of physical activity and hard work, which becomes a matter of necessity in poor people upon leaving an institution, and on this account the report of the German Central Committee in 1900 was most pessimistic as to the outcome of tuberculo-

sis work among the poor on account of the early relapse which usually occurred after leaving the institutional regime.

Patterson's scheme accomplishes two things, first, and in my opinion most important, the effect on metabolism of physical labor carefully graded in accommodation to the strength of the individual. It must be understood, of course, that no form of exercise is employed until rest, even to the point of complete immobilization, has accomplished the toxic balance, i. e. temperature and pulse have become normal. Now exercise under such conditions is not a new thing and has been employed by most of us from the beginning, not, however, in the form of work, which no matter how necessary it may be for institutions for the laboring classes, is wholly out of place among those who never have, and never will earn a living by actual physical labor. We can always expect to accomplish by the usual forms of exercise, of which walking is probably the safest, the same metabolic result without putting private patients at actual labor.

With reference to this first point in the use of exercise in normal temperature cases there is nothing debatable in the work of Dr. Patterson, and in taking up the second point, that is, auto inoculation by exercise, we must first consider the fact that Dr. Patterson, in common with most Englishmen, knows little or nothing about the practical use of tuberculin. The very fact that this measure is German in origin, has been sufficient to condemn it by most Englishmen, and it is a granted fact, I think, that England is

today twenty years behind the rest of the world in the employment of tuberculin. All will grant, I feel sure, that it is perfectly possible to inoculate our patients with the toxic substances of tuberculosis by excessive exercise. Each and all of us know how easy it is at times to dislocate the toxic balance for the time being by even such a slight thing as a prolonged and fatiguing physical examination, and in fact, this is just what we are trying to avoid. It seems to me quite certain that if by the employment of tuberculin in carefully graded, accurately measured doses we can accomplish tuberculin immunity in our patients, with that improvement of resistance which usually follows the successful administration of tuberculin, that it is a more certain and scientific method than that proposed by Patterson. It strikes me that those who are inclined to follow Patterson's methods will find the explanation of the good that is accomplished in the metabolic stimulus afforded by graded exercise in normal temperature cases, about which there is, and never has been any argument whatever, and that the usefulness of this method finally resolves itself into the restoration of physical strength in working people which becomes absolutely essential as soon as they leave institutional care and are forced to earn a living by actual physical labor.

For those of us who deal with another class entirely we can, I think, safely continue to employ exercise in normal temperature cases simply and solely for its effect on metabolism, and when seeking the restoration of toxic balance, continue to use tuberculin which has now become an empirical as

well as a rational remedy for this purpose. In his book, Patterson frankly admits his complete ignorance of tuberculin, and it seems to be quite certain, that if he had employed it in the careful way in which it is used in the institutions of our own country, his work, when finally presented to the world, would have had less to say about digging holes in the ground and have resolved itself into a thesis on the use of tuberculin.

E. S. BULLOCK.

Nearly every discovery of any value to the world has passed through a definite cycle of abuse before its final acceptance or rejection. It is received in turn with enthusiasm, doubt, distrust and finally discredit, which may or may not be lasting.

The medical profession as a whole is optimistic—it wants to believe in its discoveries, and though much may be heard, and more spoken and written about “conclusive scientific evidence and the test of time,” nevertheless each new discovery receives an enthusiastic welcome and the wildest predictions of its tremendous effect upon the morbidity and mortality tables find eager acceptance. Time passes, the death rate of the world remains the same, the brilliant results expected fail to materialize, and doubt begins to creep into minds that before harbored no thoughts not born of utmost confidence. Following fast upon this phase of medical opinion come filtering into the journals and societies reports of untoward results and even fatalities resulting under the new form of treatment. We shake our heads

sadly and say to each other that we distrust this innovation from the start. From awakened distrust to rejection and oblivion is but a step. The sad part is that after all the rejected idea might have been good in itself and the fault lie in our own use of it; we being carried away by our own enthusiasm. Cordite is a most excellent thing to drive a bullet from a gun, but no one would think of employing it to drive a decayed molar from its socket.

Fortunately for the progress of medical science, there are always a few who will cling to a new idea, through good and evil report, develop all its probabilities, point out the natural limits of its sphere of usefulness, and finally giving it back to the profession at large, teach us how, when and where to use it and what is equally important, under what circumstances to leave it severely alone. Then we take it up again, with very much less enthusiasm and a great deal more understanding, and say that we knew the time must surely come when its value would be universally recognized, we never doubted this for a moment.

All this has been abundantly true of tuberculin—when Koch first gave it to the world, he was hailed as the rescuer of a dying race. We abused his gift and in a few short months could scarcely find time to inject the massive doses then employed, between the signing of death certificates. Tuberculin was discredited and relegated to the position of a diagnostic agent for use in cattle. Then came the studies of Ehrlich, A. E. Wright and others, along the lines of immunization and ere

long tuberculin began to be used again in the treatment of tuberculosis; but used very differently. Empiricism was giving place to rationalism, the cases for its use were being carefully selected, and the dosage accurately adjusted to the needs of the case and not according to any set formula. Today we have a reconverted and chastened profession, using intelligently and with good result on the whole, an agent which narrowly escaped being lost to us forever because of too much enthusiasm and too little common sense at the start. To use the words of a well known American physician, "It takes more courage to treat tuberculosis today without tuberculin than it took to use it fifteen years ago."

CHARLES TURNER SANDS.

LEGISLATIVE COMMITTEE,

N. M. M. S.

Yater, C. M., Roswell, Chairman.
 Swope, S. D., Deming.
 Lovelace, W. R., Ft. Sumner.
 Holmes, J. G., Alamogordo.
 Desmarais, M. F., East Las Vegas.
 Cowan, W. G., Carlsbad.
 Van Almon, S. G., Clovis.
 Laws, J. W., Lincoln.
 Garmany, J. F., Portales.
 Duncan, C. G., Socoro.
 Slack, J. C., Clayton.
 Given, F. J., Hillsboro.
 Sunderland, W. E., Willard.
 Rice, L. G., Albuquerque.
 Milliken, S. A., Silver City.
 Rolls, J. A., Santa Fe.
 Thompson, R. J., Tucumcari.
 Wilkinson, S. L., Belen.
 Sexton, T. C., Dona Ana.

The Racial Question of Procreation in the Tuberculous

The President's Address before the New Mexico Society for the Study and Prevention of Tuberculosis, September 8th, 1911, Las Vegas, N. M.

By Francis T. B. Fest, M. D., Las Vegas, N. M.

The great majority of our tuberculous patients come to us with a so-called "*bad family history*." We cannot lay much stress upon all these "*bad histories*," because it is only natural that a disease, of such prevalence as tuberculosis, has found victims in most families. As far as treatment is concerned, these histories are practically of no significance at all, but when we consider the great White Plague in the entirety of all its relations, we must stop and think, and then we come to astonishing conclusions. I shall let figures speak for themselves, using the reports from reliable sources, like Weinberg. We shall not extend our study to the tuberculous adult in general but review only the fate of mother and offspring. Children born of a tuberculous mother have a fearful mortality of all causes, amounting to 60% within one year after birth. Of the mothers 30% die within four months after delivery and 45% more succumb before the year is out, making a total mortality of 75% for the tuberculous mother for the first year. While pregnancy and childbirth is of nominal

danger only in the healthy this danger increases 94% in the consumptive woman. Of tuberculous women fully 59% develop their first symptoms during pregnancy. In healthy families 3% of the children become tuberculous, while in families where only one member is affected, and it makes little difference whether father or mother, fully 21% become tuberculous. This teaches us that procreation is a direct danger to the tuberculous woman and a menace to the human race by putting forth units unfit for the struggle of life because a hereditary pre-disposition has been created during intra-uterine life. What lately the modern phthysiologist has deducted from the compilations of bulky statistics? the old master genius Hippocrates already divined when originating the axiom: "*phthisicus ab phthisico*," or "*the consumptive comes from the consumptive*."

In many cases the child becomes infected through the infected domicile, yet the number does not decrease very materially when the children are removed from their homes.

Again, with the exception of early disease, possible through placental transmission, and therefore not inherited, but congenital, can we not force our present knowledge into the belief of a latency of tuberculosis as an etiological factor, and there remains for us only to accept the theory of a genetic origin of a certain pre-disposition. The term "heredity" does not apply to most manifestations of this condition; I use the word for sake of convenience. There must be at times a true inheritance of the defective resistance obtained through a line of tuberculous ancestors, yet in the great majority of cases do we deal with a qualitatively inferior somatogenesis? The germinal cells, of either parent, are biologically damaged in their qualitative value by specific defections due to the toxins of tuberculosis. In other words; ovum or spermatozoon were in a poisoned condition at the time of conception. On the other hand; I explain the very great mortality of the newborn from a tuberculous mother within the first year by so many and various causes with this bio-toxic degeneration of the ovum at the time of impregnation but, qualitatively impaired also in other directions by the complex condition of the mother. In short; we have to deal with qualitative multiple minus-variations of our species which tend to eliminate themselves.

Philanthropy of modern culture demands the eradication of the disease, and when the last afflicted shall have been cured, and when thereby the last focus of infection shall have disappeared, the scourge will have lost its horrors for mankind. This sounds very well; this corresponds with our ideals,

but let us place ourselves in the viewpoint of scientific sociology; let us strip our views of all sentimentalities and look at the bare, naked facts! The conclusion may seem a paradox but is a startling truth nevertheless. Nature needs infectious disease to eliminate the weak unfit, and to prevent the creation of this type, the inferior must disappear. It was culture; it is civilization which has kept the struggle going. Man in a primitive animal state would not know these struggles of the modern sanitarian. How fitting is the tale in the Bible according to which the mother of all men ate of the fruit of knowledge and this led to death!

The present conditions of our race are such that we do not recognize the plans of nature. Nature's process is slow, as slow as the formation of the earth and the evolution of life. We can study and understand it, but one generation can witness only a very limited phase of the whole process. Civilization enables us to recognize the workings of nature and in turn, we can apply this our knowledge against nature and her cruel process of elimination. One point stands out prominently: if procreation could be eliminated in the tuberculous the largest proportion of the disease would be prevented within a short space of time. It is the trend of modern legislation to apply nature's laws to racial warfare; prevent the mating of the unfit. Some states exclude tuberculous, epileptic, insane and syphilitic from the right of matrimony. Many states give the inmates of their prisons the right to be sterilized without being unsexed thus preventing the procreation of the morally unfit. The tuberculous is certain-

ly, physically, of inferior type and unfit, because too many manifest their inferior type, and because pregnancy influences harmfully the course of the disease. Disease breeds poverty, poverty breeds crime, and the chain of economic and racial damages due to tuberculosis increases constantly.

Let us consider first those who contemplate matrimony while afflicted. Some states refuse them a license, others have no restrictions. While from the racial viewpoint of social prophylaxis the propagation of the tuberculous is absolutely undesirable, our present social conditions do not seem to be ripe for such action, and then, our modern matrimony does not always mean procreation, and therefore such a sweeping measure may not become absolutely necessary.

For the tuberculous man the matter of matrimony is of an entirely different nature than for the tuberculous woman. As bread-earner he will be a failure. For him the time will come when he can no longer earn his livelihood and he will be bedridden. During this stage he will be a burden; his illness means poverty and distress for his wife. The close contact with the wife in quarters not suited to his condition, her need of nursing him without the proper knowledge or means of protection, will create in many cases additional victims of the White Plague. Think of the wife as mother at the same time! It is different if the man has means, or if at least he is financially provided for during the time of his illness. It is true that his life before marriage has not been as well regulated as afterwards, and the bride, if she wants to be care taker of and invalid, either with or without the

assistance of a trained nurse, can be of great help. *But has man the moral right to accept such a sacrifice*, even though made most cheerfully? While the situation is better here for the man it is worse for the wife and offspring. We dare not overlook the danger by germinal transmission, and we forget the all present danger for the wife. The man may have all the comfort money and love can produce, yet neither the one nor the other can prevent the transmission of a defection in the resisting power of the offspring. The offspring may have all the care and attention, love and money can lend in bringing up the offspring but the stigma of the inferior type exists, and nature may attempt sooner or later her process of elimination.

Aside from the question of pregnancy, the general situation of a tuberculous bride is not favorable for a cure. If the man's means are limited, she will have to work. It is true she works now for herself, but she cannot have the rest the disease demands. For some girls it may be more convenient, they may be better provided for, and in many cases the husband can send her to an institution until completely recovered. The rich girl's status will not be altered, she can have all attention and aid, *but what will she gain?*

The first question of sociologic importance is; what to do with the pregnant consumptive. *Nature*, we think of interruption of pregnancy. The consensus of opinion is, that such a step is justified in many cases. This topic is an unpleasant one on account of the variance of opinions in regard to the right of the unborn. The Roman idea is to protect the fruit of conception

under all circumstances, even to the death of the mother, because the unborn has a soul and the soul has only a value in the heavenly market when baptized, therefore, the aim must be to allow the birth of a living child with utter disregard to anything or anybody else. What is wrong and what is right? To come to a conclusion we must throw aside all traditions and superstitions. We must go back and deduct for ourselves the artificial from the real. All civilized laws recognize the preference of the life and the health of the mother over that of the unborn, and the right of the unborn increases with its duration *in utero*. The Teutonic and Germanic nations, in their common laws, valued the life of the unborn from the time of quickening only. Before that period of gestation criminality entered only when bodily harm was done to the woman. This corresponds to the old and generally adopted theory of Aristotle, that the soul of the fetus depends upon its development. Even Hippocrates, who is considered the standard of medical conscience, while teaching to preserve the life of the unborn, tells us minutely how he induced a miscarriage by mechanical means in a young harpist, most likely a member of the demimonde without reason of health. At the beginning of the Christian era culture and luxury made abortions common, so common that it was deplored by the writers of the time. We must not forget furthermore that monogamy was the result of civilization and not of Christianity. While the church later on demanded monogamy, in the early days a condition, which we can call only concubinage, was en vogue, and we have no reason to believe that

otherwise the early Christians abstained from such general practices as the voluntary limitation of the offspring. The church, from time to time, as the demand was felt, invented her present dogmas. The sanctity of matrimony had to be discovered and with it arose the need of the invention of a sacramental ceremony. Most likely the practice of abortion was common to judge from the laxity of the church morals, and therefore St. Gregory Nyssa had to discover that the life of the soul begins with conception. School men refused to accept that theory until the priest Florentinus, with the help of the Pope (a strange authority in scientific matters!), settled all doubt as far as canonic law was concerned.

There is another phase to these dogmas as far as our professional conscience is concerned. While the Roman doctrines forbid absolutely interference with the pregnancy of the married; probalism and casuistry found excuses for the unmarried, however not for reasons of health. I refer to authorities of Roman morals like Liguori, Busenbaum, Settler, Sanchez (*de matrimonio*) Vicar General Rabeyrolle (*Instructions pratiques*), R. P. Gury (*casus conscientiae*). Professor Rousselot, *Theologie morale universelle*, chapter IV, art. 1, finds that if a pregnant girl bluffs that she will take her life and sticks to the bluff, the fetus may be destroyed in order not to destroy the girl also. Henry Dumas, S. J., *Compendium Theologiae moralis*, 1875, lib. j. cap. ii, art. j. no. 2-10, considers the purpose and aim of such abortion and the probability of its justification. Jean Marin, S. J., tells us naively, on page 423,

that abortion is a wrong, but that while it is the *only*, and therefore *necessary*, means to prevent a pregnant girl from shame and disgrace this wrong for a good purpose can be excused. These theologians, while masters of ecclesiastic sexology and sometimes real treasures of porceography, had no inkling of sociologic medicine, else they might have considered the subject of this address. At any rate, let us hope that the time has come when what was tolerated by subtle arguments of equivocal reasoning for purposes of the unfortunate's standing in conventional society, will be justified when undertaken for the noble purpose of preventing suffering of a member of human society. Christianity is the religion of highest love and it is the aim of this love to prevent suffering and misery!

While I personally demand that germinated life be protected whenever possible, I fail to see any reason for hesitation to remove the proliferation tissue, of none but embryonic shape, from the womb of a woman when it means her health. In this matter it would be necessary to proceed with the greatest caution. *No man should trust his judgment alone*, this question can be decided only by consultation. It would be unwise to empty the uterus when the term is near, nor would it be wise to undertake so serious a measure when the disease is advanced. The indication for the interruption of pregnancy are not within the scope of this address.

Now this measure will relieve the stipulation only for once. A repetition cannot be considered as moral. Yet, sexual abstinence with rare exceptions is neither desirable, practicable, nor is

it possible. The sexual instinct will overcome the fear of death. I need only refer to the repeated Cesarean sections in the same woman.

Man has the same type of organs as all mammals, the instincts are the same. Civilization has brought about that the present man, with the same organic equipment as the brute, has gained a certain but limited mastery over the primitive instincts. Some of these instincts have been developed away from the plans of nature. This created first comfort and then luxury, and the sexual instinct has become a more dominant factor in man than in the brute. So has the instinct of self-preservation developed the science of healing, the art of sanitation, and we combat with the products of civilization nature's aims of the elimination of the unfit. It has become wrong from the viewpoint of a civilized race to allow nature in certain cases to take her course; but to subject a woman repeatedly to the just mentioned surgical measure must be and is wrong. The responsibility must be born by both mates, and the afflicted ought to assume the *moral* but *never* such a *physical* burden. This leads us first to the prevention of conception. While prevention has become an economic evil under ordinary conditions, the limitation of the offspring of the tuberculous must be a virtue, and the means is the problem to be solved. The popular methods are neither absolutely safe nor esthetic, and their great condemnation is the fact that they frequently lead to harm in one or in both.

The ideal way would be to utilize science to render the tuberculous sterile without unsexing. The idea of steril-

ization is not new. Mensinga in Germany, already in the early nineties, became an advocate of sterilization of the tuberculous woman. He came to this conclusion through the fact that there were many reports of serious operations on the tuberculous with good results and even with improvement of the tuberculous lesion. Some of these women conceived after the recovery from the operation, and then succumbed to the aggravation of the tuberculosis by a subsequent pregnancy. Lately it has been advocated that the uterus and adnexa be ablated, and a number of cases have been cited to show that the tendency to fat accumulation after ovaristomy has a beneficial influence upon the disease. Vasectomy is practiced now in many of our prisons. The small operation can be done so, that later on, if desired, the vas can be made patulous again. A little more serious will be the procedure in the woman, yet the danger is small, and even here the ampulla or ovary itself can be imbedded into a fold of peritoneum in such a manner that the ovum cannot reach the uterus, and yet functions can be restored again at will.

What objections can a man raise to having this trifle done? Aside from the racial question, the economic factor involved, which very few will appreciate, the love for his wife should be sufficient. Why should the woman hesitate? She will remain sexually perfect, except that conception cannot take place. Why should not the tuberculous man accept this slight burden under all conditions?

Before closing I must state that I am fully cognizant of the fact that pregnancy does not always mean ag-

gravation, nor does maternity always mean an additional victim of the disease. Yet in the experiences of others, according to the statistics perused, and according to my own not small observation, these cases are relatively too rare, especially in regard to pregnancy, so that it would seem advisable to consider them as more than possibilities. Not every case of appendicitis is fatal, nature takes often a freakish course, yet we prefer not to run the risk of non-operative treatment.

The facts I have laid before you are not new but their reiteration appeared necessary in order to make myself clear; the only novelty is the outspoken manner in which I suggest the application of delicate facts. While many so-called authorities,—in not so very few instances perhaps not to oppose the current standard,—prefer to avail themselves in unclear phrases, these my suggestions have been and are practiced nevertheless every day. We cannot deny that our present theories of morals, their individual and public standard, recognized and laid down by law or letter, by appearance and teaching, are far different from their private value, application and real practice. We are undergoing a constant and steady process of evolution, physically and psychically, and with the advance of our civilisation we recognize cause and effect in their true relation and apply them to all conditions civic and economic, individual and racial. Man recognizes more clearly his true place in nature: woman, an inferior possession of the primitive man, a valued gift of God for man's pleasure and for childbearing in oriental religions, until lately despised.

should she not allow herself to be selected by man, has found since an entirely different place in nature as equal of man. Yet neither law nor society has fully appreciated this. And therefore must we free our minds from those subtle rests of old traditions which influence yet the public and their opinion.

I shall sum up what I consider good and clear reasoning for the general situation, for man and woman as equal civic and economic units of human society:—

The tuberculous is unfit for procreation and maternity. For their own and general good they must be treated in institutions; this would bring about *eo ipso*, a state of non-procreation.

Maternity being noxious to mother

and offspring, the interruption of pregnancy is conditionally indicated, but must be condemned as habit in the same woman.

So-called "preventatives," as popularly used, while excusable, cannot be recommended, being partly unsafe, unesthetic and often injurious.

The ideal condition for the tuberculous of both sexes is that of facultative sterility. Slight surgical interferences, known to bring about this condition, must be recommended and recognized as the routine measure. *It may be unwise to state one's opinion. You may condemn me for the opinions just expressed.. Without innovation no progress is possible, and the formerly ridiculed is known as truth today.*

The Diagnostic Use of Tuberculin in Pulmonary Tuberculosis

Col. George E. Bushnell, Ft. Bayard, N. M.

In discussing the diagnosis of tuberculosis by means of the febrile reaction to tuberculin, let it be understood at the outset that I am not attacking the therapeutic use of tuberculin. While hardly to be called an enthusiast, I am prepared to admit from my own observations, as well as from the testimony of an immense literature, that tuberculin, properly and cautiously used, at times is productive of good. Nor would I be understood to claim that the diagnostic use of tuberculin is always and at times to be rejected. I can conceive of circumstances in which the cautious use of tuberculin as a means of diagnosis in the hands of the expert may do more good than harm. At the same time I am convinced that tuberculin in massive doses is an extremely dangerous substance and that much harm has been caused by it. I believe that its harmlessness has been unduly emphasized and that it is time to call attention to its dangers, inevitable as well as potential. The application of the brake may be less indispensable on occasion.

Koch, the inventor of tuberculin, believed that it destroys living tuberculous tissue. According to his theory by each injection a certain amount of

tuberculous tissue is destroyed until finally all tuberculous tissue is killed and cast off and the patient is permanently cured. This method is evidently based upon the assumption that pulmonary tuberculosis is acquired by inhalation; that the focus which first becomes manifest is the initial focus, or that at all events the various foci which may exist in the lungs are all initial in a sense, and that when they are destroyed the disease is extirpated. We know now that the disease frequently, if not always, takes its rise from the bronchial glands and often attacks the deeper part of the lungs first, so that the manifestations upon the surface of the lungs may give but a very imperfect idea of the extent of the tuberculosis, and this, which may be called the heroic method, requires large doses of tuberculin and is extremely dangerous.

The claim is made today by the advocates of the diagnostic use of tuberculin, acting under a somewhat different theory, that it does no harm in properly selected cases. Great series of cases are advanced to prove that tuberculin rightly used is harmless, the series comprising 10,000, 20,000, even 30,000 cases. Not thus are important questions decided. The very

magnitude of the series constitutes a sufficient proof that what is meant is that tuberculin did not manifest immediate irreparable harm—the patients did not quickly die thereafter. What man is capable of following the future course of a thousand, not to say 30,000 patients, and of deciding infallably that not one had suffered injury? To the objection that harm may have been caused which was not immediately manifest, Bandelier and Roepke rejoin that tuberculosis is a very chronic disease and that it is not possible to state finally at autopsy that the lesions found were caused by tuberculin. Precisely so; but it is a poor rule that will not work both ways. It is equally impossible to state at autopsy that some of the lesions had *not* been produced by tuberculin. In his recent work on tuberculin treatment Sahli quotes with approval, Wolff Eisner's remark that "injuries from the use of tuberculin are published only in the minority of cases because the opponents of tuberculin do not use it and therefore have nothing to publish, whereas the advocates of tuberculin, on the other hand, do not publish unfavorable cases because they, under the influence of auto suggestion are accustomed to refer an unfavorable course of the disease to intercurrent exacerbations independent of the use of tuberculin." (Sahli *Tuberkulinbehandlung und Tuberkulose Immunitat*, 3d ed.) Let me give another quotation direct from Wolff Eisner (*Fruhdiagnose und Tuberkulose Immunitat*, 2d Ed. p. 212) "If one bears in mind that nothing happens after a tuberculin injection that might not happen in the course of an (untreat-

ed) tuberculosis, it is clear that it depends entirely upon his temperament and upon his attitude towards tuberculin how a given observer will interpret any injury which may occur."

The tuberculin reaction is, or appears to be, identical with phenomena seen when the disease becomes more active. The increase of rales; of sputum; of tubercle bacilli in the sputum; of pain; of fever; is precisely what we find in cases that grow worse spontaneously. The reaction is manifestly an inflammatory reaction. It is fair, therefore, to assume that in giving large doses of tuberculin (and all diagnostic doses of tuberculin are large doses) we are running the risk of exciting a congestion of the focus. Congestion means, of course, more blood, more lymph, more leaching of poisons out of the focus, more sweeping of tubercle bacilli into the efferent lymph channels. The mechanical effect of the congestion is to afford a greater physical opportunity for dissemination of tuberculosis. Time fails to set forth adequately Tendeloo's theory which should be familiar to everyone interested in tuberculosis. Now aside from the inflammatory congestion, what do we know of the specific effect of tuberculin? Does it favor the bacilli in effecting a lodgment in previous healthy tissue? From the very interesting experiments of Roemer and Hamburger we have learned that the tuberculous animal possesses a certain degree of immunity to reinfection with tubercle bacilli and that large doses of virulent bacilli break down existing lesions with the production of cavities but seem to be successfully resisted elsewhere. Yet the animal goes on to

die of primary tuberculosis. What possible explanation can there be for this but that the poisons of the caseous foci, the aggregation there of tuberculin, etc., affect unfavorably the nutrition of adjoining tissues, preventing them from resisting the spread of the bacillus?

Deycke and Much (Beitrage zur Klinik der Tuberkulose XV 2) in their experiments in the immunization of healthy guinea pigs to tubercle bacilli by means of solutions of tubercle bacilli in lecithin, neurin, etc., report a case in which a guinea pig treated with the solution and subsequently given repeated doses of tuberculin developed no immunity to a dose of tubercle bacilli which other guinea pigs immunized in the same way but subjected to the tuberculin injections bore without reaction. Wolffsohn (Wiener Klinische Wochenschrift No. 37, 1910) reports the case of a woman treated with tuberculin for multiple tuberculous abscess of the mamma, who had had tuberculous coxitis twelve years before. After four small doses of Bacillen emulsion the scars of the coxitis operation became reddened. The tuberculin was at once stopped but both scars broke down. If they had simply reddened one might think only of a toxin reaction. Their breaking down showed, in my judgment, a reawakening of the local tuberculous process. Marmorek (Berliner Klinische Wochenschrift, 1907, p. 621.) has found that normal animals into the peritoneum of which blood containing tubercle bacilli was injected in doses which should not have made them tuberculous, developed tuberculous lesions if given 8 to 10 doses of old tuberculin. He considers his experiments to show that

tuberculin injection repeated several times produce an activation of tubercle bacilli (in the healthy animal).

A patient with pulmonary symptoms was given tuberculin in San Francisco for diagnosis on June 30, 1910. He reacted to the first dose and was sent to Fort Bayard. He died of a terrific hemorrhage on July 27, 1910. The autopsy showed a ruptured aneurism of the pulmonary artery. The man had been a coal miner and his lungs were filled with carbon and looked unusually black. One gland at the hilus contained a minute tubercle; just outside another rather large and quite hard gland was a small white streak appearing to proceed from the gland, and forming by its color, a striking contrast with the remainder of the lung. This streak on microscopic examination was found to contain tubercle bacilli. Now the color of this streak shows very clearly that it was of recent formation—there had been no time for the deposition of pigment. No evidences of tuberculosis besides those mentioned were found anywhere in the body. The findings, I think, warrant the conclusion that the diagnostic injections of tuberculin had awakened a tuberculous activity, had activated the bacilli lying in or about the gland, and had led to a minute extension of tuberculosis in a patient quite free clinically from the disease. The case is a beautiful illustration of the fact that there may be a well marked reaction to tuberculin from an insignificant focus.

If extensions are produced in apparently healed lesions; if the tubercle bacilli given in doses which they should resist, can be activated in healthy animals by tuberculin, we may

reasonably suppose that in patients with already active lesions the results of tuberculin injections will be to arouse a larger and under certain conditions a disastrous activity. Opportunities are rare to demonstrate the production of a tuberculous extension in the ways above enumerated. We hardly need such corroboration if we consider that even the advocates of tuberculin state that it leads to the throwing off of caseous masses and the production of cavities, and also that the sputum formerly negative often becomes positive for tubercle bacilli. Seven cases from the General Hospital at San Francisco had been negative for tubercle bacilli and were afebrile in San Francisco. They reacted to diagnostic injections of tuberculin with rise of temperature and were sent to Fort Bayard. The sputum of all were found positive upon arrival and all but one had fever lasting about a month after arrival. Such facts can only mean a breaking down of tissue, a liberation of tubercle bacilli in the direction of the bronchi, and if in that direction why not also in other directions?

Now, I am quite prepared to admit the occasional benefits claimed for the diagnostic use of tuberculin—the improvement in weight and appetite, the sense of well being, and so on; the tonic effect of tuberculin in short. The claims of the advocates of tuberculin, however, that the harm is temporary, the benefits more permanent, should be carefully scrutinized. I look upon the tonic effect of tuberculin as an example of the specific stimulation of non-specific processes analogous to the beneficial effects of furunculosis and typhoid upon the nutrition of the pa-

tient after recovery. Like other tonics its effect is temporary. But if we admit that tuberculin leads at the same time to an extension of the tuberculous process, that is a more permanent effect. You will agree with me, I think, in saying that with every extension of tuberculosis the prognosis becomes worse, that the liability to a fatal termination increases directly with the total amount of caseous substance in the body. True, if the extension of the tuberculosis has been slight, the damage may have been slight, yet every extension of the disease has a share in the ultimately fatal result. The cardinal principle in the therapy of tuberculosis as I look at it, is at least to do no harm, to avoid the production of any exacerbation, of any extension, by our treatment. If any such extension is due to us we can not relieve ourselves of our responsibility by the claim that we did no harm because the patient lived years after our intervention, if the patient finally dies of tuberculosis.

Tuberculin then, if it produces any extension whatever, may be considered in so far to have done harm to the patient. Cases have been reported in which a violent reaction has apparently been a benefit. Such cases, in my judgment, are cases in which fibrosis is well marked, the lesions well shut off. Here a stimulation of the nutrition of the part, even a throwing off of encapsulated foci, might be conceived to be sometimes of help, and it is such cases only that are benefitted by the flushing out incident to the tuberculin congestion. But such cases are not those in which the diagnostic use of tuberculin is indicated. The more truly initial the case the

more likely that it is harmed by large doses of tuberculin. There is a large and increasing class of tuberculin advocates who reject all local reactions in the therapeutic use of tuberculin as dangerous. If therapeutic reactions are dangerous the reactions from diagnostic injections are equally so.

Hitherto we have considered only what might be called typical reactions. Is there danger of encountering unexpected sensitiveness to the usual doses? Koch in studying the subject found that he reacted first to 25 mgms. and considering himself a healthy man decided that healthy men react to 25 mgms. but that those who react to 10 mgms. are actively tuberculous. But Koch was later found to have a little tuberculosis, and in his last illness was comforted by the false hope that his troubles were of a tuberculous nature. Hamburger has recently shown that children really free of tuberculosis tolerate immense doses of tuberculin, 100, even 1000 mgms, without reaction, and his experiments with the "Stitch" reaction lead him to declare that among those infected with tuberculosis some persons are 10,000 times more sensitive to tuberculin than others. Hammer had a reaction to 2-1000 of a mgm. We have seen reaction to 6-1000 of a mgm. at Fort Bayard. I have seen well marked focal reaction from the v. Pirquet test. We can readily see that it is quite possible 2-10 mgm. of tuberculin, the initial dose recommended by Bandelier and Roepke, may be at least 100 times as large as would be necessary to secure reaction in some cases.

It is often said that even if harm is done by the use of tuberculin the benefit from the securing of an accurate

diagnosis outweighs such harm. We would be glad to admit this if we could assume that a negative reaction excludes tuberculosis and that the reaction is only positive in the presence of clinically active tuberculosis. But neither of these assumptions can be maintained. According to the Koch school tuberculin gives a positive reaction in about 90% of tuberculous cases (Dluski, *Beitrage zur Klinik der Tuberkulose* X 1). There are 10% of tuberculous cases in which according to the advocates of the method themselves, the absence of reaction may lead to erroneous conclusion. Time only permits the citation of a single case in illustration. Bertrand of Brussels (*Revue Internat. de la Tub.* XVII. 5) reports the case of an American with a history of pleurisy who was given diagnostic injections of tuberculin in this country with negative result, and was told by his physician that he had no tuberculosis. The patient thereupon married and sailed for Europe but developed tuberculous meningitis on shipboard and died before reaching land.

To show that the tuberculin reaction may occur in the absence of a clinical tuberculosis a better case could hardly be cited than the case of aneurism already mentioned. It is pretty generally admitted that the tuberculin reaction by fever is simply an indication of the fact that the patient developed a resistance to tuberculosis. The febrile reaction furnishes no indication as to the extent or as to the site of the disease. It may proceed from a small focus, as in a gland, of no importance and it may therefore in cases of suspected pulmonary tuberculosis be absolutely misleading when the fo-

cus in the lungs is really quiescent, still more misleading in the not rare cases in which normal signs (especially in the right apex) have been misinterpreted as evidence of tuberculous lesion. I must confess to a great sympathy for patients who are led to give up home and friends, perhaps make great business sacrifice, lose at all events some valuable months or years, and all through a mistake. You see such cases occasionally no doubt. They are exceptional of course, but the injury done the patient is so manifest that I feel that special attention should be called to them. There is nothing that affords me more pleasure than to be able to say to such patients, you have not and have not recently had active tuberculosis. Fortunate he who under such circumstances does not get a reactivation of a quiescent tuberculosis through the very use of massive doses of tuberculin! Then the question becomes much more difficult to solve. True, the patient makes a good recovery and swells the favorable statistics of his sanatorium; but at what cost to himself!

If such is the case in patients who are suspected of having tuberculosis on the basis of more or less indefinite and slight variations from the normal signs in the thorax, what shall we say of cases of well marked pulmonary disease, not tuberculous, which give a positive reaction? I would cite such affections as bronchiectasis, empyema with rupture into a bronchus and asthma, and would recall the case of thoracic aneurism already cited in another connection. I have had under my care on two occasions a gentleman whose fibrinous bronchitis did not prevent him from manifesting unusual

physical activity and endurance, yet seemed to point irresistibly to the presence of tuberculosis in the minds of other physicians. Such cases as these, if given a diagnostic dose of tuberculin are sometimes doomed to the diagnosis of tuberculosis, with all the unnecessary suffering that such a diagnosis might bring with it. Stahelin (Berliner Klinische Wochenschrift, Feb. 28, 1910) has recently called attention to the fact that aged individuals often suffer from a cachexia which is attributed to cancer but which at autopsy is shown to be due to tuberculosis, the disease being otherwise remarkably latent. On the other hand Fischer (Deutsch. Archiv for Klin. Med., 1910) has reported that in 57 cases of cancer he found in 14 cases at autopsy a recently developed tuberculosis, usually in the lymph glands, there being no manifest tuberculosis in the lungs or in the other internal organs. Of 321 autopsies in subjects more than 40 years of age, in 39, more or less extensive and progressive tuberculosis was present. Exclusive of these, in the remaining 192 cases in which death was caused by other diseases, 13 cases were found with recent and circumscribed tuberculous lesions which were developing in the vicinity of the ancient foci. The average of these cases was 59 years. In patients of advancing years we may thus have on the one hand a tuberculous cachexia which simulates that of cancer; on the other hand the reactivation of a previously quiescent tuberculosis from the vital depression due to other chronic disease including cancer. It is evident that a positive reaction to tuberculin in such cases is of no significance as respects the dif-

ferential diagnosis between cancer and tuberculosis.

There is another subdivision of great practical importance upon which I will only briefly touch, namely, the diagnostic use of tuberculin where it is contraindicated, in cases of pulmonary tuberculosis which are manifest and should be diagnosticated without resort to tuberculin. In giving the indications and contraindications for the diagnostic use of tuberculin it is always assumed that the physician is capable of correctly interpreting the findings in the lungs; that the case is truly initial; that there are no evidences of what might mean an extensive tuberculosis. Only then surely would the most enthusiastic advocate of tuberculin sanction its use. Unfortunately, tuberculin is often resorted to in cases in which there is manifest evidence of a widespread pulmonary involvement of some kind, but in which perhaps cursory examination of the sputum results negatively for tubercle bacilli. It is well known that there are some cases of advanced tuberculosis in the sputum of which tubercle bacilli are found with great difficulty. The possibility of great harm here from the use of tuberculin is quite apparent. It is not too much to say that whatever may be held as to the diagnostic use of tuberculin by the expert, it is quite out of place in the hands of one who is not skilled in the diagnosis of diseases of the lungs.

To recapitulate: the tuberculin reaction may do harm by favoring extension of the tuberculous process. The tuberculin reaction is not always positive in cases of active tuberculosis: it is sometimes positive in cases in which there is no active clinical tuberculosis.

In the presence of other pulmonary disease the tuberculin reaction may be absolutely misleading. The positive tuberculin reaction in cases which have a quiescent tuberculosis may lead to a false diagnosis of activity. Similarly the positive tuberculin reaction plus a series of misinterpreted physical findings, may lead to a diagnosis of active tuberculosis where none exists clinically. It is important no doubt, to make an early diagnosis of pulmonary tuberculosis. It is equally important to be on our guard lest we injure our patients by appearing to find a disease which is non-existent.

I will close with the following quotation from Sahli: "Though I consider the early diagnosis of tuberculosis important and am much in favor of tuberculin treatment, I absolutely reject diagnostic tuberculin injections. The result of the so called diagnostic injection of tuberculin is not convincing in either the positive or the negative sense—and I consider the diagnostic use of tuberculin as dangerous. Indeed after expressing the conviction that tuberculin treatment is only free from danger with the most careful dosage and with the avoidance of all reactions, how could I be so blinded logically and medically as simply for diagnosis to expose the patient to the dangers of tuberculin poisoning? For in the diagnostic use of tuberculin, let us confess it, one endeavors to overload the body with tuberculin in order that it may react and if this attempt is not successful the first time, the diagnostician demands a second and third trial with sometimes multiplied doses! And yet the method is not even certain, and in addition almost always superfluous."

of Immunity
Immunity
Immunity
Immunity

of Immunity
Immunity
Immunity
Immunity
Immunity
Immunity
Immunity
Immunity

Immunity in Tuberculosis by Inoculation of Living Tubercle Bacilli

Gerald B. Webb, Colorado Springs, Colo.

In 1897 Koch wrote, in summarizing numerous experiments, "We shall not succeed in habituating the organism to absorbing entire bacilli, which have been injected subcutaneously; and by injecting small quantities of them we shall not habituate the organism to absorbing more."

After numerous experimental failures in producing immunity with dead tubercle bacilli and tuberculin, Koch then wrote "We shall never obtain better results with non-living bacilli."

Of these somewhat contradictory positive statements, the latter alone I believe today to hold true.

In summarizing all experimental results on the production of protection against tuberculosis the conclusion is forced upon us that not only must the vaccine be a living virus but it must also be a virulent one, for non-virulent tubercle bacilli do not confer immunity.

I will content myself with merely quoting to you the disappointing results of bovine vaccination, and would make the suggestion as a corollary of the work I shall relate that the work of immunizing cattle be again attempted using the method of inoculation of gradual increasing numbers of virulent bovine bacilli.

In a few words I want to lay before you the situation regarding tuberculosis as I know it today. I do not believe it an exaggeration to state that the human race is riddled with the disease, and also that many domesticated animals are in a similar condition.

The cure of tuberculosis is no doubt the most urgent problem now facing the medical scientist, yet even of greater importance must be ranked the prevention of this disease.

By means of the recently introduced tuberculin tests we are not able to show in the living—what we have long since known of the dead that a large proportion of the human race is infected with the tubercle bacillus.

In certain communities—and probable most—practically 100% of children by the age of puberty can be proven by these tests to be infected with the tubercle bacillus.

Recent investigations in the study of immunity indicate that this infection may be in part protective and may be interpreted as nature's crude method of vaccination against tuberculosis.

Animals similarly infected are able to resist further infection with the tubercle virus provided this is of small

degree, yet if exposed to greater amounts of the tubercle bacillus, they now succumb to tuberculosis more rapidly than perfectly healthy animals do; in other words these animals, like the infected children, are in a state of what is termed hypersensitiveness.

It would seem that in spite of improved hygiene, civilization necessitates the exposure, at some time of our childhood, to virulent tubercle bacilli, with the result that we become infected, although not always actively diseased. This infection may in time yield, by the digestion of the tubercle bacillus by the body cells, and be entirely overcome, or it may be latent in the body and change the cells of the whole organism into a condition of hypersusceptibility.

The probability is that in infection from dust by inhalation we do not receive very large numbers—at least not millions of bacilli, probably only a few hundred or less.

Infection by the intestinal route requires a much larger number in all experiments than infection by inhalation.

Tuberculosis is peculiarly a disease in which not so much perhaps the virulence of the bacteria as the numbers received determine the course of infection.

We gave three full grown male guinea pigs, thirty five, seventy five and one hundred and twenty five virulent human tubercle bacilli respectively.

The inoculation were given subcutaneously in the nipple area and it was possible to follow the course and degree of infection in the inguinal glands. The larger number produced the more rapid infection and in this

pig tubercle bacilli were obtained by puncture of the neighboring inguinal gland in three weeks and the animal was then killed and showed extensive visceral lesions.

It is of course impossible in this chance exposure of our children to regulate the number or the virulence of the tubercle bacilli by which they will be infected, and it would therefore seem reasonable to suppose that had we the means of inoculating children by methods in which both conditions are controlled we would perhaps be able to improve on nature's method and accustom the organism to the tubercle virus without producing infection.

Such vaccination I am able to tell you has already been accomplished and I will now describe to you the steps which have led up to this apparently so radical an achievement.

It occurred to me in 1906, after watching the ingenious technique of Professor M. A. Barber, by which he was able to isolate single bacteria, that could we apply this mechanical principle and inoculate animals with increasing numbers of virulent bacteria beginning with one, we might be able to produce successful immunity.

With Dr. W. W. Williams of Colorado Springs I worked first with mice and anthrax.

It is known that one twenty millionth of a drop of anthrax broth culture would kill a mouse in 24 hours.

By inoculating first one bacillus and gradually increasing the numbers we were safely able to give mice doses, which inoculated all at one time would have killed a mouse.

Guinea pigs were then inoculated with virulent tubercle bacilli in a similar manner.

We have found that about twenty five virulent human tubercle bacilli injected subcutaneously into a guinea pig will usually cause death from tuberculosis.

In one animal we continued the inoculations at weekly intervals for nine months and in all injected subcutaneously about 150,000 bacteria.

Lieb working in our laboratory carried on similar work on rabbits with the bovine tubercle bacillus. He was able, by this method to begin inoculating a litter of rabbits at the moment of birth and to continue the inoculation with safety as they grew.

Tubercle bacilli could not be obtained from the guinea pig receiving thirty five until the animal was killed six weeks later and then the disease was strictly limited to the inguinal glands.

The lesions in the guinea pig receiving seventy five bacilli were intermediate in degree to the other two pigs.

In the spring of 1910 we carried the work a step farther by inoculating some twelve monkeys (*Macacus Rhesus*) with virulent human tubercle bacilli.

The animals were thoroughly tested with tuberculin and shown to be uninfected before the experiments began.

The inoculations were kept up at weekly intervals over a year and up to date the animals are perfectly healthy.

Two of the monkeys received enough virulent tubercle bacilli to kill nearly twenty thousand guinea pigs, and yet these monkeys weighed only as much as three full grown guinea pigs.

The monkeys have been repeatedly tested with tuberculin during the course and none have reacted.

Three monkeys have been killed and a thorough search has revealed no trace of tuberculous disease. To make no mistake, due to over looking possible foci of disease, their different organs and lymphoid glands were injected into guinea pigs and no infection of these animals was produced.

We have not yet learned the lowest possible number of virulent human tubercle bacilli, which will infect a young monkey. We were surprised however to find the resistance of monkeys to the culture we employed very much greater than that of guinea pigs. Two hundred and fifty as a single initial dose failed to give one monkey tuberculosis, whereas thirty five infected a guinea pig.

To attempt the same experiments on children would be cause for grave anxiety. We have shown that such inoculations were harmless and even of some benefit to tuberculosis individuals, but this was entirely a different matter to inoculating the non-infected.

A most unusual opportunity however was offered by a distinguished scientist, himself dying of tuberculosis who requested me to inoculate his two children—age nine months, and three years—in a similar manner to that by which we had succeeded with the monkeys—experiments which this gentleman watched with great interest.

The mother of these children it may be mentioned was also found to be actively tuberculous.

The children were first tested by means of the von Pirquet skin tuberculin test and reactions were found to be negative.

The inoculations were started with

one bacillus and increased at weekly intervals until six hundred had been injected.

The von Pirquet tests were again applied and found negative and some months after the inoculations of the live germs had ceased were once more found negative.

It may be conjectured that in view of a certain degree of racial immunity in man greater than in the monkey, probably a larger number of tubercle bacilli may be needed to infect a child than a monkey.

We have however not considered this possibility but have inoculated the children with more cautiously graded numbers than we did the monkeys.

We may in time learn that perhaps a single dose of a few hundred bacilli inoculated subcutaneously will protect our children, but for the pres-

ent it is most important to be unusually cautious, and regard the possibility that children can be infected as easily even as guinea pigs.

The question as to whether the subcutaneous inoculations will provoke an immunity which will protect the lungs we will work out further in the monkeys.

It has been shown however that an infected guinea pig will resist a second infection of moderate degree just as well by the lungs as by the subcutaneous tissues.

I am more and more being forced to accept the conclusion that tuberculosis is especially a family disease, and I feel convinced that it is in these families a vaccination is sorely and surely needed and can be safely accomplished by the method I have related, a method which if necessary can be repeated every few years.

Auto-Inoculation in Pulmonary Tuberculosis

By John Francis McConnell, M. D. Colorado Springs, Colorado.

Some years ago I had the privilege of addressing the New Mexico Medical Society on Rest and Exercise in the treatment of Pulmonary Tuberculosis and, at that time concluded that rest was of the greater importance. I recollect my use of Hilton's Analogy of the tuberculous joint and the practical deduction based on the common experience that fever declined under rest and increased from fatigue.

Subsequent to this I made the observation that certain individuals with slight fever seemed to derive benefit from exercise and that not infrequently a normal temperature resulted. At this time I was investigating the diazo reaction in the tuberculous and found in my urinalysis that albumoses were present in some and absent in others (Albumosuria of Phthisis J. A. M. A. May, 1906.) It was noted that those ambulant tuberculous in whom slight fever declined as a result of graduated exertion were without exception free from albumosuria. From this data I made some deductions which I now know not to have been well founded, nevertheless an important fact seemed demonstrable, viz. that excellent results could be obtained in suitable cases by graduated labor.

These experiences having been

largely confirmed by the writings of Walther of Nordrach and Patterson of Frimley it remained but to place an empiricism on a scientific footing.

Those of us who have been following the researches of Wright and Douglas especially in the matter of the opsonic index in tuberculosis have been struck by the marked oscillation of the curves showing that spontaneous oscillations are constantly occurring or, as Wright expresses it "such patients are living in a succession of positive and negative phases."

J. Freeman has recounted his observations in regard to the effects of massage upon localized bacterial infections, showing that both active and passive movements resulted in variations of the opsonic index of the patient to the organism concerned. These results have been confirmed and extended by numerous observations so that it is clear that influences altering the local blood supply, such as massage, active and passive movements, the induction of hyperaemia by Bier's method, and the use of the X-rays, may all produce a discharge of bacteria or their toxins into the circulation and thereby give rise to an auto-inoculation. According to Wright the various results of bacter-

ial infections may thereby be satisfactorily explained.

He suggests that generalized infections are characterized by frequent or even continuous auto-inoculations, that strictly localized infections do not give rise to them at all, while that in a third class in which the infection is more or less localized, occasional auto inoculations occur depending upon variation in blood and lymph supply.

Treatment by means of bacterial vaccines is an attempt to utilize the information at present available in regard to the nature of immunity by the administration of graduated doses of bacterial products with a view to increasing the production of antibodies. The work of Wright has served to extend widely the use of vaccines and to afford an intelligible explanation of their action, while determinations of the opsonic index supply in some degree a means of measuring the immunizing responses evoked. It is of interest to note that the determination of the opsonic index of the blood before and after massage of an infected area has shown that the immunizing responses induced by the auto-inoculation thus set up, are strictly comparable to those obtained by inoculation with bacterial vaccines prepared for the organisms concerned, and that the results of such auto-inoculations may be beneficial or harmful according to their degree. It is not surprising therefore, that attempts have been made to control auto-inoculation with a view to treatment,—in other words to utilize the patient's own bacterial products rather than to inject others obtained outside the body.

Recently Dr. Paterson of Brompton Sanatorium, England, has discussed

in a most thoughtful and suggestive way, the effect of exercise in pulmonary tuberculosis. Apparently a most remarkably successful method has been evolved by him without taking into account the theory of auto-inoculation yet patently dependent upon it. Dr. Patterson describes how he conceived the idea of putting patients to work involving the use of the upper limbs as well as the lower, supposing that this might possibly exert a more direct influence upon the lungs. He found that suitable patients could perform the hardest manual work with improvement in their general condition and weight, with a decrease in the quantity of sputum and without the occurrence of hemoptysis. He then observed that some patients who made no progress on light work, showed marked improvement when put upon a harder grade, and also that some patients who had slightly over-exerted themselves and developed a small rise of temperature, were subsequently none the worse; indeed they were sometimes much better and were able to resume the same grade of work without ill-effect. It was also found in the case of some patients who over-exerted themselves, considerable, against advice, that headache, fever, loss of appetite and sometimes pleurisy resulted.

On applying the theory of auto-inoculation to these results as suggested by Inman, it was discovered that numerous opsonic index determinations coincided with the clinical evidences of positive and negative phases, and that the conclusion was inevitable that physical exercise induced auto-inoculation and that systematic gradation of exercise regulated and controlled

the extent of those auto-inoculations.

The extent of the auto-inoculations may be fairly accurately gauged by a careful study of the temperature, pulse, the sputum, the patients own feelings and appetite and by the body weight, the aim of treatment being the raising of the patient to his normal or highest known weight and the elevation of his specific resisting power to such a degree that he can perform the hardest work without the risk of introducing a dose of bacterial products into the blood large enough to produce a constitutional disturbance. The control of the auto-inoculations is therefore one of the first objects of the rational treatment of pulmonary tuberculosis, if the theory of auto-inoculation is accepted as the explanation of the phenomena of the disease and of the effects of rest and exercise. In febrile cases the auto inoculations are excessive and must be reduced by appropriate means.

I have found that the most effective and most rapid method of securing this object is by what has been termed complete immobilization which consists of absolute rest in bed, the patient being treated in every way with the exception of diet, like a case of typhoid fever. He is not allowed to move in bed, to read, to wash himself, to cut up his food, or to go to the lavatory, while every means is employed to lessen ineffective or unnecessary coughing. If rising from bed or the ordinary moving about do not produce a rise in temperature a preliminary period of walking exercise is prescribed. This is followed by graduated exercise,—Patterson of Frimley using six distinct grades and adopting various guides for determining when a

patient shall be changed from one grade to another.

It is difficult to give better clinical indications of an over-inoculation than this picture,—a temperature of 99° in a man and 99.6° in a woman, accompanied by headache and loss of appetite. A patient having such symptoms is placed at once at absolute rest until the temperature is normal and is then placed at the grade of work which caused the over-inoculation.

Many patients have to pass through several grades before they obtain effective auto-inoculation, and (this is the explanation of the observation previously offered—that some patients who make no progress on light work advance satisfactorily when put upon a harder grade,—just as in tuberculin therapy the results are frequently not marked until the larger doses are reached.

Apart from specific advantages, the idea of graduated exertion appeals very strongly to those in charge of ambulant cases and particularly to those supervising closed institutions, where very often the patient of such must be ready for work directly he is discharged with his disease arrested. Moreover it brings a more definite interest into the treatment than when the only exercises prescribed are graduated walks. The delight of some patients of mine who have reached the post hole digging grade has given me great satisfaction.

Even if we regard the theory of auto-inoculation as but a working hypothesis, at least graduated labor will result in a restoration of physical capacity.

708 North Tejon Street.

Blood Pressure in Tuberculosis at High Altitude

LeRoy S. Peters, M. D., and E. S. Ballock, M. D., Silver City, N. M.

During the past five years we have made blood pressure observations at The New Mexico Cottage Sanatorium at an elevation of 6,000 feet. In 1908 one of us reported our work in the Archives of Internal Medicine.* Since that report we have made records of over 600 cases and have seen no reason to change the opinions voiced at that time.

Taking the work of Thayer of Baltimore, Emerson of New York, and Ritter of Chicago for purposes of comparison we find the blood pressure at 6000 feet to be increased both in consumptives and in normal individuals residing at this elevation.

This seems to be in contradiction to the excellent work of Gardiner and Hoagland of Colorado Springs some years ago. Just why this difference should be so marked it is difficult to say, altho it is easy to understand that a part of their experiments could bear no relation to ours since they were made on Pikes peak at an elevation of over 14000 feet. The sudden change from a moderate to an exceedingly high elevation does not give the body time to accommodate itself to the

marked change, and in our opinion would tend to invalidate their findings from a standpoint of comparison. Gorbatschew* showed an increase of 35 mm of mercury as a result of high altitude observations. This is the only work other than Gardiner and Hoagland that can be used as a comparison with ours. The experiments of investigators like Crile and others done with pneumatic cabinets can bear no relation to work done on patients residents of high altitudes. The sudden changes of pressure are too great, the body does not have time between experiments to accommodate itself to these changes, and we must of necessity get a series of readings at variance with continued residence in elevations.

Pomeroy of Monrovia, Calif.,* in an attempted analysis of our first report endeavored to show that our findings were due to faulty technique or to a willful juggling of tables. One needs to but glance at some of his criticisms to see the absurdity of his statements. Take for instance his comparison of our work with that of other observers. Excepting the find-

*Peters, L. S., Archives of Internal Medicine, August 1908.

*Poemroy. Interstate Medical Journal, Vol. XVIII. No. 7. 1911.

*Gorbatschew. Centralblatt fuer die Med. Wissenschaften II 1891.

ings of Gardiner and Hoagland that of the others, as we have already shown were comparisons between pneumatic cabinets and altitude observations, which to any fair minded man is no standard of comparison at all. The only one at high elevation, that of Gorbatschew, showed even a greater increase than we claim.

Further, we maintain nothing for altitudes such as that of Monrovia. We have never done work in the minor elevations and our conclusions are based only on observations made at an altitude of 6000 feet.

In an attempt to show from our tables that we are using pathological pressures to bring up our general average he cited a pressure of 172 mm of mercury, which in revising our statistics he leaves out claiming it to be due to some kidney complication or as a result of sclerosed arteries. However, to make his point, he carefully leaves out an unusually low pressure of 90 mm of mercury which again considering our tables would tend to offset the high reading of 172. If unusual pressures are to be eliminated why not be fair? From a reading of the entire paper one is impressed with the fact that, because Gardiner and Hoagland found pressures at variance with ours; because Smith of Fort Stanton, quoting these same authors, said it is an established fact that altitude lowers blood pressure; because pneumatic cabinet experiments fail to show our results; because Pottenger working out statistics on the heart in tuberculosis could not make his readings coincide with ours; then according to Pomeroy, our conclusions must of necessity be incorrect.

We stated in our original report

that we drew no radical conclusions from so small a number of cases, but now after five years we find out results to be the same in over 600 cases, as in our preliminary communication. Since it is our intention to report this work in full at the next meeting of The National Association for the Study and prevention of Tuberculosis, we shall state only our findings in this article referring the reader to the transactions of the National Association for the tables upon which this report is based.

Considering all classes of cases our results show that at an elevation of 6000 feet the average pressure in consumptives is 128 mm of mercury. Thayers averages for the same class of patients at sea level is 103 mm., while his averages for normal individuals is about the same as ours for the tuberculous. From observations made here on normal individuals we find the average to be 142 mm. again showing the effects of altitude on healthy people.

On first coming to a high elevation the pressure temporarily is lowered, but after a short residence a rise is noted and an increase over the original readings at sea level.

From a prognostic standpoint we believe blood pressure findings are of great value in tuberculosis. Here we have noted that if a patient continues to improve his pressure gradually rises, if no improvement is noted but on the other hand the status is stationary the pressure remains practically the same. If the patients condition grows worse the blood pressure gradually falls.

We find also that the degree of involvement bears no relation to the

pressure, but we did note a constant relation between toxemia and blood pressure, the latter falling with the absorption of toxins. Here also the inverse ratio of the pulse and pressure as noted by Ritter is observed.

We have also studied in a limited number of cases the relation of blood pressure and hemorrhage. Altho we have been unable to observe the reading directly before the hemorrhage occurred we know from records taken immediately after that the pressure is increased from 15 mm to 25 mm of mercury. It is only reasonable to suppose that such increase occurred before the hemorrhage and was the immediate cause of the bleeding. Just why we have so few hemorrhages at this elevation with our increase pressure we have never been able to say. The two facts seem to be in direct contradiction. However, as suggested by Dr. E. R. Carpenter of El Paso, the lowered pressure on arrival gives the body time to accommodate itself to the change and owing to the effect of altitude the walls of the capillaries and circulatory system in general are strengthened and are better able to

withstand the increased pressure which afterwards results. It is a well known fact that patients bleeding at sea level over a long period of time having been placed on a train during this series and upon arrival in the elevations of the southwest have been surprised to find such hemorrhages cease and never to have occurred again.

From our observations covering a period of five years and embracing a series of over 600 cases we draw the following conclusions:

1. The blood pressure is increased at elevations of 6000 feet.
2. The pressure of both normal individuals and consumptives is higher here than at sea level.
3. The pressure tends to increase with continued residence.
4. That from a prognostic standpoint the blood pressure findings are of great value in tuberculosis.
5. That there is no relation between the degree of involvement and the blood pressure, but that there is a constant relation between toxemia and blood pressure.
6. That the blood pressure is increased with pulmonary hemorrhage.

Public Measures in the Prophylaxis of Tuberculosis

T. W. Colbert, Albuquerque, N. M.

Tuberculosis is a disease depending largely upon social conditions, and it is evident that no effective prophylaxis of the disease can be brought about without the consent and efforts of the general public. Curative medicine should be in the hands of the public. We as medical men feel the more deeply the responsibility resting upon us as guides and teachers, and it is to us that the public naturally looks for a presentation of the accurate details for the prevention of diseases. The public must first be enlightened as to its need of this prophylaxis. The public deals with facts, and the medical profession must show the public that tuberculosis exists, that it is preventable, and that it does the world great injury, and then the proper and sensible thing remaining for the public to do will be to fight it. When we of the medical profession have clearly shown how the disease may be exterminated, it will be up to the public to take up its share of this part of the 'white man's burden,' and consummate this work, in which the medical man must necessarily be the pioneer. It may be safely said that unless the public comprehend clearly the importance of the end towards which we are all striving, and appreciates the relation of all

measures to that end, but little progress can be expected.

The campaign for the prevention of tuberculosis is essentially a campaign of education. Once let the general public thoroughly understand how unnecessary tuberculosis is, how easily it may be prevented, and how hopefully controlled, and wise laws, needful expenditures, and enforcements of sanitary regulations will follow and the battle will be won.

To educate the world, however, on any sanitary topic is a long and difficult task, but to regard the eradication of tuberculosis as a "hopeless task" is to display the pessimism of ignorance. We of this generation are starting the crusade against tuberculosis, but it will be the work of the future generations to complete it, and as our hope is in the future, and as the children of this generation are to be the citizens and the law makers of the next generation, we should begin our educational campaign with them, and with the chief medium of their education—the schools. In the introduction of the study of hygiene, properly taught, into our school systems, lies, I believe the keynote of success in securing and maintaining the proper sanitary conditions in all

communities. The future citizen should be taught his duty in conserving the welfare of others, and in the altruistic aims of modern hygiene and sanitation — and all these things should be systematically and correctly taught by competent teachers, and as thoroughly as grammar and arithmetic. The text book work might with advantage be supplied by lectures by medical men. Through the children we can hope to educate the fathers and grandfathers—for what the school children carry home they impart to their parents—and again, when these children grow up and become the citizens of the future, those first principles, which will then have become an integral part of a “national conscience” will outweigh all others and cause laws to be made that will bring about a universally sanitary state of affairs—and then tuberculosis will be a thing of the past.

Leaving the school children, and considering the public at large in the educational campaign, we find it no small problem to determine just how we may reach and instruct the largest number most efficiently. What is necessary is a propaganda founded on the basis of a well known hygiene facts, and extended to every class of population. The primal task of the day, then, is the winning of the intelligence and labor of all men to the cause. The educated and intelligent people are even now fairly well informed, but the ignorant class—the people of the slums and tenements—constitute the largest and most dangerous class, and to the vast majority of these, our words of wisdom, though proclaimed from the housetops, will fall upon unheeding

ears. How about these—the unteachable class—who reject our instruction and remain sources of danger to their environment? Many of these regarding their condition as absolutely hopeless do not seem to care how many others they infect, and consequently disregard all precautions they are requested to observe. Unless they can be placed in institutions where they are rendered harmless, and at the same time given a better chance to prolong their lives, we will find this class a stone wall in the way of prevention. Our hope is in winning the active, intelligent co-operation of all the classes of society down as low as possible, and perchance, we may win ever so many, leaving so few inert, that coercive measures may at the least be resorted to, in the final sprint.

The idea of prophylaxis in tuberculosis must first be grasped by the health authorities of the world. From these it must spread to the entire medical profession, and then to the intelligent progressive lay public, and then to the average reading public, and then to the public that reads seldom or little, and finally it must take a firm hold in the slums and tenements, upon the unreading public. It must be a process of spreading through one stratum after another of the social fabric, until the lowest stratum is reached. Not only must the intelligence permeate stratum after stratum from top to bottom, but sympathy with the movement must also permeate the same strata and, finally, activity, looking toward prevention, must come last, and go through the same course, when we should at least be in position to ameliorate, and then to prevent the great scourge. In this process of edu-

cation, working from the top downward, we can at first count on winning many to the cause simply by the distribution of literature, etc., of knowledge concerning the means and methods of preventing tuberculosis. As we go a little deeper we must supplement our literature with lectures, and as we go deeper still, our lectures must be illustrated, and finally the point is reached when we are totally unable to convince except by showing the people by means of the tubercular exhibits, with demonstrations. Starting from the higher strata we are dealing with a more and more credulous public as we descend, and we must accordingly produce stronger and stronger evidence. The higher and intellectual strata easily understand that tuberculosis affects not only the health of the nation, but its prosperity—but as we descend, we find the strata less and less able to understand the far reaching effects of tuberculosis upon the helath of the country, its prosperity, or upon the race, but more and more inclined to look upon the problem as affecting the individual, and giving co-operation only so far as self is concerned.

The clergy should be a means of rendering efficient service in educating the laity on the prevention of tuberculosis. They will usually be found ready to enter the work with zeal and enthusiasm if the matter is brought to their attention with due regard to its importance and seriousness.

The possible influence of the lay press must also be taken into consideration.

Of great potential value in the anti-tuberculosis propaganda are the tuberculous hospitals and dispensaries.

These in addition to the care of the sick form centers from which the lines of battle against the spread of the disease radiates.

Anti-tuberculosis societies are of great value in interesting the community in the fight.

We need wise laws in order to restrict and prevent tuberculosis, and their adoption and enforcement are sure to come as soon as the majority of the public see the matter in its true light. The time is ripe for the enforcement of uniform ordinances against promiscuous expectorating. In spite of anti-spitting agitation in most of our communities we see almost daily our street corners used as veritable spittoons.

The value to the public health of a system of registration of all tubercular cases can hardly be denied, and too great stress cannot be laid on the subject of compulsory disinfection of dwellings or quarters which have been occupied by the tuberculous.

Building laws should exist and be enforced so that the disgraceful tenements of our cities become an impossibility.

Some form of legislation should be directed towards reforming or controlling the marriages of the world. All infants are potential citizens of the state, and have the right to live—and at least as much care should be taken in the breeding of children as in the breeding of horses, but unfortunately it is not. But the great difficulty in the way of attaining even an approximate degree of ideality in the direction of proper legislation, is in getting our law makers sufficiently interested to see the vast importance of these various preventive measures

This difficulty must be overcome by sending educated and conscientious men to our legislative bodies, and by educating the public in the laws of health so that they will recognize the cause of unhealthy conditions, and know the proper methods of overcoming them. We need more doctors in our legislative chambers and executive officers. The presence of members of our profession on both sides of the house of our first state legislative assembly would be of estimable good to New Mexico in the cause of health—because of their ability to give lucid explanations to the lay members, and the profound confidence which their professional standing together would render. In legislative matters the medical man can be counted on to be on the right side of the great questions concerning the health of the people, and he is the only member of whom this can be said.

It is impossible in this paper to

mention all the methods in which an enlightened prophylactic endeavor may find expression. With the realization that all cosmic influences, all life processes, all economic relationships bear upon this subject, will come the attempt of the general public at improvement of all local conditions, and the amelioration of mankind in every way, and the interests of capital will not be allowed to supersede the interests of the community, but the government—municipal, state and national—will act intelligently for the common good,—for the question of eradicating tuberculosis is after all a State and municipal one. It is pre-eminently a sociologic problem, and in the movement for prevention every citizen can, by lending his countenance, be of service to his country. The eradication of the disease is by no means solely the medical man's problem; it demands the combined intelligence and labor of all who are interested in the welfare of the race.

The Frequency and Importance of Mixed Infection in Pulmonary Tuberculosis

(By R. B. Homan, M. D., El Paso.)

It is not my purpose to endeavor to go into the subject of mixed infection in tuberculosis in detail, nor to quote statistics which have been presented in the able papers given us by some of our best men during the past three years, and with which you are no doubt quite familiar, but I shall present some notes from my own experience which I trust will be productive of some discussion of interest.

Allow me to say that my definition of Mixed Infection in Tuberculosis is that it is that condition in which other pathologic micro-organisms are present in sufficient numbers with the tubercle bacillus, to aggravate the symptoms and add to the gravity of the case.

My limited experience has convinced me that the condition exists much more frequently than we had heretofore thought it did, or than may be shown by the microscopic findings in an examination of the discharges, and that many unfortunates who have failed to get well might have done so had the presence of other pathogenic germs been discovered and gotten rid of and thus the individual given a better chance to combat the tubercular infection.

The notes which have been kept of

my cases with special reference to mixed infection were begun about eighteen months ago, and my interest in this condition was stimulated by the fact that previous to that time I had seemed to find it existing in a much larger per cent of my cases than had been reported in any of the statistics that were at my command at that time.

During this eighteen months one hundred and eighty four cases have come under my direct observation, and of this number 139, or about 76 per cent have shown unmistakable evidence of a mixed infection of some kind, which was of sufficient severity to affect the progress of the case. A few others showed pathogenic germs other than the tubercle bacillus, but symptoms and progress of the cases did not indicate that these were doing any damage, and they are not included in the number.

Of the 139, streptococci were found in 119; staphylococci in 34; pneumococci in 31; catarrhal bacillus in 21; influenza bacillus in 19; colon bacillus in 11; pseudo diphtheria in 3; and a bacillus of the typhoid-dysentery group in 1.

In a small per cent of these cases we were unable to demonstrate the tubercle bacillus in the discharges, but the cases are included here for the

reason that the condition had been diagnosed tuberculosis from physical examination, and had been referred to me for treatment for that condition.

In a large number of these cases we were not able to determine the presence of an organism other than the tubercle bacillus by microscopic examination alone, but upon having a culture made it was not usually difficult to find them, and in cases where we would find one organism by microscopic examination we would find perhaps two or three from a culture growth, and sometimes the very one we found from the growth was the one which was the most active in producing the symptoms, as was subsequently shown by the improvement which followed treatment directed to it.

Perhaps it has been rather accidental that I have encountered such a large per cent of these cases, but the subsequent progress of many of them has proven to me that a mixed infection which really affects the progress of the case occurs more frequently than we have heretofore suspected.

As to the importance of this condition, it is only necessary to remind you of some of the symptoms which are frequently produced by it.

1. Increased temperature rise. A large number of patients who run high temperatures in tuberculosis do so as a result of some form of mixed infection, and when the nature of this is determined, and where it can be gotten rid of the temperature falls quite considerably.

2. Increased cough and expectoration. No doubt many of you may recall cases in which the cough was exceedingly irritating and the amount of

expectoration large, and showing numerous streptococci and perhaps other organisms upon microscopic examination of the sputum. Of course it is not necessary to remind you that in tuberculosis hard coughing is harmful to the diseased lung.

3. Night sweats are more frequent in patients with mixed infection, and while this is only a symptom and not one of serious import, still the sweats are depressing to the patient and in that way retard the progress of the case.

4. Because of the extra absorption of poison, the digestive system is nearly always more impaired than in a simple tuberculous infection.

5. The presence of these organisms in a cavity or the local process in the lung keeps up an irritation which makes it easier for the tubercle bacillus to make rapid progress, and the general effect upon the resistance of the individual renders it difficult for him to build up.

The treatment of Mixed Infection does not come within the scope of this paper, but you will perhaps pardon me for the suggestion that in my hands the administration of vaccines made from a culture of the germs found in the patient's sputum has proven to be the most successful method of overcoming these various infections, coupled with good food, rest and open air as in the treatment of a tuberculous subject under any other circumstances.

I have had good success in many cases with stock vaccines and serums, but they are so frequently productive of very annoying attacks of urticaria and arthritis that have largely discontinued their use.

Care of the Stomach in Tuberculosis

A PRELIMINARY REPORT

(By Dr. S. G. Sewell, Albuquerque, New Mexico)

For the last three and a half years, during which time I have had charge of the Southwestern Presbyterian Sanatorium, special attention has been given to the stomach. During the first year and a half practically all of the patients had their stomachs examined, and analysis made of the stomach contents. Since then, owing to the stress of other duties, these examinations have been limited to those who complained.

A test-breakfast consisting of two slices of toast without butter, and two cups of tea without sugar was given, and a portion removed through the tube in one hour or a little less. This was examined in the usual way. When symptoms of motor trouble were present, the stomach was washed in the morning before breakfast, to see if it had emptied over night. If no food-remnants were found, a test-meal consisting of soup, meat, bread, vegetables and fruit was given, and the stomach washed after seven hours.

Something over a hundred cases have been examined in and out of the Sanatorium. An occasional case of hyperacidity occurred,—not more than three of sufficient degree to cause symptoms. A few cases of catarrh

were found, traceable to the usual causes that produce this disease, but in no case was it due to tuberculosis. One case of gastric cancer was seen in consultation with Dr. Cornish, and no case of ulcer. Cancer and ulcer are not common in tuberculosis, the former on account of the two diseases belonging to different ages, and the latter for reasons that will appear later. The acidity of the stomach, and consequently the stomach — digestion, was materially reduced in about seven out of ten cases. This ratio was maintained pretty constantly throughout the entire series, and it occurred as often in the incipient as in the more advanced cases. This seems to be the typical stomach — condition of tuberculosis, and it is probably due to this cause that gastric ulcer is not more common in this disease.

Actual dilatation of the stomach did not seem to occur more often among the tubercular than among the non-tubercular. However, there were signs of motor insufficiency in nearly all of the advanced cases, which was due to muscular weakness rather than to dilatation. This weakness seemed to be a part of the general debility, and when it was possible to improve the general condition of the patient the

stomach — symptoms also improved.

At first the patients were encouraged to eat large quantities of meat. However, as it developed that the stomach — digestion was lowered in seventy per cent of all cases, and the motor functions impaired in practically all of the advanced cases, a more-easily digested diet seemed more suitable. Besides, nearly all of those that ate large quantities of meat suffered periodical attacks of indican toxemia, and a great many had excessive amounts of indican in the urine, indicating that intestinal putrefaction was going on in the intestine the most of the time. There is no doubt but that the red meats are a valuable article of diet in tuberculosis, but we found it necessary to prepare them in such a manner, and to give them in such quantities that the patient's digestive organs were able to take care of them.

Those patients who depended mostly upon milk and raw eggs seldom did well for any considerable length of time; and when it became necessary to limit a patient to milk, or milk and eggs diet, we found it wise to get back to a general diet as soon as possible. Those who did the best were the bread eaters. This may be due in part to the fact that it requires an appetite to eat bread, when milk and other fluid or soft foods can be eaten without much appetite. Well-baked white wheat bread is one of the very

best foods. It contains half as much proteid as beef, and the carbohydrate constituent is perhaps the most-easily digested of the starches. Theoretically, those with a reduced stomach digestion would do better to eat more bread and less meat, and our experience bears out the correctness of theory.

In view of the fact that tuberculosis is a disease that lasts for months or years, and that sooner or later digestive troubles develop in nearly every case, it would be wise carefully to examine and estimate the digestive functions of every patient. It often happened that with rest and relaxation, a patient would maintain an appetite for weeks or months, and then the appetite would fail, and digestion become impaired, and an examination would show that he had been overtaxing his digestion in some particular direction, perhaps to the permanent injury of his stomach.

It is true that a great many disorders of digestion are due to poisoning from tuberculosis, but it is also true that these derangements are usually in the direction of an aggravation of some already overtaxed function of the stomach; and patients with a perfectly normal digestion usually escape these disorders. By proper regulation of the diet we can save our patients these stomach symptoms in most cases, and thus avoid the most distressing part of these tuberculosis reactions.

BOOK REVIEW

COLLECTED PAPERS BY THE
STAFF OF
ST. MARY'S HOSPITAL (Mayo
Clinic,) 1910.

Collected Papers by the Staff of St. Mary's Hospital (Mayo Clinic) for 1910. Octavo of 633 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1911. Cloth, \$5.50 net.

The papers compiled in this volume are valuable and well written. The large material of the Clinic is carefully studied, and results are controlled by pathological findings at operation or autopsy, or both. The articles on aoesophageal diagnosis and treatment are good, and well illustrate the value of modern methods in these obscure conditions. Attention is called to the frequency of absence of HCL with presence of blood in the stomach contents as a symptom of chronic gastritis. Wilson, from careful analytical work, believes that Cammidge reaction is without value. The article by McCarty on the pathology of gastric ulcer is well worth reading. Mention is made of the great frequency with which gastric ulcers develop into carcinomata. W. J. Mayo describes very clearly his operation for partial gastrectomy. In the next article he states that in cases of gastric and duo-

denal ulcers seen, the ulcer in 75% was in the duodenum. McCarty's article on gall pathology is very good. Draper Maury's work on death from intestinal obstruction is exceedingly interesting and the result of a great deal of hard work, C. H. Mayo calls attention to Lane's Kink; this condition should be suspected oftener, and be looked for at operation. The articles on chronic appendicitis, the pathology and dyspepsia caused by it, are very instructive. The danger of a Meckel's Diverticulum to those persons who have such a structure is well illustrated by Balfour's article; also that its presence should be suspected in obscure cases where the appendix does not seem sufficiently involved to explain the conditions of the patient. Two articles are devoted to the subject of diverticula of the lower bowel, and the danger of their development into carcinoma. W. J. Mayo has a very good paper on the "Removal of the Rectum for Cancer," in which he gives the post-operative statistics of his cases. Palmer's article on "Pelvic Transplantation Metastasis as a Means of Reccinoma" is interesting and valuable. The sections on the kidney and thyroid gland are very good, and would well repay reading.

PRENTISS

The C. V. Mosby Company, of St. Louis, has announced the publication of a book on Pellagra, to be ready by January 1, 1912. This book is being prepared by Doctor Stewart R. Roberts, of Atlanta, Ga., who has just returned from Italy, where he studied the disease in its natural habitat. While in Europe, the doctor made extensive research regarding the etiology and treatment of Pellagra, and the data contained in the book will reflect the latest and best work that has been done in connection with this disease, making it a reliable guide to those seeking information on the subject.

THE PHYSICIANS VISITING LIST

(Lindsay and Blakistons).

A pocket size visiting list containing various handy tables and blank pages for records. Regular, monthly and perpetual editions.

Price Regular edition, by mail, \$1.25.

P. Blakiston's Son & Co.,
1012 Walnut
Philadelphia, Pa.

THE PRACTITIONER'S VISITING LIST FOR 1912.

An invaluable pocket-sized book containing memoranda and data important for every physician, and ruled blanks for recording every detail of practice. The Weekly, Monthly and 30-Patient Perpetual contain 32 pages of data and 160 pages of classified blanks.

The 60Patient Perpetual consists of 256 pages of blanks alone. Each in one wallet-shaped book, bound in flexible leather, with flap and pocket, pencil with rubber, and calendar for two years.

Price by mail, postpaid, to any address, \$1.25. Thumb-letter index, 25 cents extra. Descriptive circular showing the several styles sent on request. Lea & Febiger, Publishers, Philadelphia and New York.

A TEXT - BOOK OF THE PRACTICE OF MEDICINE

The New (10th) Edition Revised.

A Text-Book of the Practice of Medicine. By James M. Anders, M. D., Ph. D., LL. D., Professor of the Theory and Practice of Medicine and of Clinical Medicine. Medico-Chirurgical College, Philadelphia. Tenth Revised Edition. Octavo of 1328 pages, fully illustrated. Philadelphia and London: W. B. Saunders Company, 1911. Cloth, \$5.50 net; Half Morocco, \$7.00 net.

The 10th edition of Ander's Practice of Medicine easily surpasses the previous editions. The topics have been rearranged in many instances, bringing it up to date as to classification of diseases. It has been enlarged, and thoroughly revised throughout.

Anders is a thoroughly practical man, dwelling more upon treatment than most of the present day writers, and consequently makes the work more valuable for the general practitioner. He is a clear and concise writer, and the text is easily followed. The histories of diseases are avoided, except in special instances where they are demanded. They receive all the attention however, that is of a practical nature to the physician, whose time for reading is limited. The book can be highly recommended to the profession as one of the most practical books, in its entirety, that is on the market

today. In making a comparison with more extensive works of recent publication, the reviewer finds more written upon Paratyphoid Fever than in any other work with which it was compared. And many similar instances might be cited. Consequently the writer unhesitatingly recommends the work to the profession.—SEXTON.

PROGRESSIVE MEDICINE

A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences, edited by H. A. Hare, M. D., Published by Lea & Febiger, Philadelphia and New York, \$6.00 per annum, Volume VIII, No. 3.

This number contains the diseases of the thorax and its viscera,—dermatology and syphilis,—obstetrics and diseases of the nervous system.

William Evart who edits the diseases of the thorax enters fully into the advances made in our knowledge of the diseases of the heart and the circulatory system and giving an interesting review of the whole matter; he adds to his part transfusion and intravenous injections. This obstetrical section, under Edward P. Davis is complete and his review on the cesarian section is worthy of perusal.

FEST.

A QUINQUENNIAL OF MEDICINE AND SURGERY

Published by William Wood & Company, New York, \$5.00 in cloth, \$6 in sheep and \$7 in Half Morocco.

This is a book of value to all physicians and surgeons as bringing their medical libraries up to date. It is of

special value however to subscribers for Buck's Reference Book of the Medical Sciences.

This volume gives a survey of the advances which have been made in the medical and surgical practice, methods knowledge and theories during the last five years, and forms a reliable guide to the new methods of treatment which have come into use, and which seem likely to remain as permanent additions to our resources for healing disease.

The book is arranged alphabetically in double column pages, the height of the column being identical with that of the Reference Hand Book type page. The general arrangement is similar throughout, and illustrations appear liberally as required.

The volume contains no fewer than 1252 articles of varying length—all the more important subjects have been written by specialists, and so far as could be discovered, every new medical term which has originated during the past five years has been included. The work is indispensable to every practitioner who wishes to keep abreast with modern changes and with the latest knowledge regarding therapeutic and operative procedures—but especially is it of importance to owners of the Reference Hand Book, to which it forms a valuable revisory supplement.

The editor of the "Quinquennium" is J. W. Ballantyne, M. D., F. R. C. P. E., editor of "Encyclopedia of Medicine and Surgery" and author of many works.

The volume is fully illustrated, especially with respect to new operative procedures, is bound in styles to match the Reference Hand Book bindings.

FEST.

The New Mexico Medical Journal

Volume VII

JANUARY, 1912

No. 4

E · D · I · T · O · R · I · A · L

At the last meeting of the Colorado State Medical Society, held at Steamboat Springs, Colo., Dr. Shaw, who was one of the Fraternal Delegates from New Mexico, read a paper before that body entitled "*The Making of a Physician*," in which he placed great stress on the moral fitness of the candidate for professional honors, and also on the importance of his possessing a thorough pre-medical training. He summarized his paper as follows:—

"The raw material must be good. The young man must be honorable, truthful, reliable, punctual, temperate—the sum total of which enters into the formation of what we are want to call *character*. He must be considerate, kind, self-forgetting, also of good health and possessed of all his perceptive faculties. He should have a thorough preliminary training, preferably a full college course, a four year course in a well equipped medical school, if possible one year as an interne in a hospital, and last, but not least, one or two years' association with a well established practitioner of medicine."

The Doctor's article was published in the November number of Colorado Medicine, and seems to have been well received, as evidenced by an editorial in that Journal. The following is what its Editor has to say regarding the value of this production: "The essay of our guest, Dr. Shaw, of New Mex-

ico, 'The Making of a Physician,' treats of a subject somewhat remotely connected with the welfare of those who feel that they have passed the making process. It touches a matter in which America is making such progress as astonishes all other civilized nations. That this progress may be maintained it is necessary that the subject be frequently discussed. It is certainly worth 20 cents to have such an important matter brought anew to any physician's attention. It is worth many dollars to the people to whom everyone in a social state is indebted if that physician will give to Dr. Shaw's paper and theme the attention it deserves.

The secretary of the New Mexico Medical Society wants to again call the attention of the Secretaries of the various component county societies to the fact that reports of the election of officers and other matters acted upon at the annual December meeting of the county societies are due. They should be sent in at once in order that our records may be kept up to date.

We have received the official announcement of a conference on Medical Education, Medical Legislation and Public Health, to be held by the American Medical Association through its committees on Medical Education and Health and Public Instruc-

tion. This meeting will be held in the Congress Hotel on February 26th and 27th. The program as announced so far is as follows:—

MONDAY, FEBRUARY, 26TH.

On Monday the Council on Medical Education will hold its Eighth Annual Conference. A special address will be given by Mr. Frederick C. Hallett, Secretary of the Conjoint Board of England, on "The Organization and the System of Examinations of the Conjoint Examining Board of the Royal College of Physicians of London and the Royal College of Surgeons of England." Other important topics bearing on medical education and licensure will be discussed.

TUESDAY, FEBRUARY, 27TH.

On Tuesday there will be Conferences on Medical Legislation and Public Health. If necessary the session will be continued on Wednesday.

On Tuesday evening a Public Meeting will be held at Orchestra Hall, at which addresses on Public Health will be delivered by Senator Robert L. Owen, of Oklahoma, and Senator Robert M. La Follette, of Wisconsin.

COUNTY SOCIETY NOTES

Luna County Medical Society met at the office of President Dr. P. M. Steed, Dec. 13, 1911. Those present, P. M. Steed, president; J. G. Morris, treasurer; S. D. Swope, secretary; and Doctors Carter, eKller and Martinyohl.

Minutes last meeting read and approved. Being the regular annual business meeting the secretary reported five new additions to the society for 1911. Treasurer reported balance of \$18.35 in treasury.

Election of officers was called which resulted in Dr. Edward A. Martinyohl being chosen as President, Dr. George D. Carter, vice-president, Dr. J. B. Keller, secretary, Dr. J. G. Moir, treasurer; Dr. M. M., Crocher, Censor for three years. Dr. S. D. Swope delegate to state society; Dr. Pinckney M. Steed, alternate.

After disposing of the scientific post graduate course, society adjourned to meet for post graduate work on next Tuesday, Dec. 19.

S. D. Swope, Sec'y.

First Treatment of Open Wounds by the Surgeon, and Its Influence on After Treatment and Recovery.

Dr. C. P. Brown, El Paso, Texas.

There has been a very great tendency in the past, both among the laity and the profession, to undertake to do too much in the primary treatment of open wounds, in unfavorable surroundings and under unfavorable circumstances. It is also true that it is one of the hardest temptations for the surgeon to resist, upon being called to treat an open wound, not to go ahead and undertake to complete the dressings, including amputations, sutures of tendons, etc. The patient is usually surrounded by excited and oversolicitous fellow employees or friends, and they all feel that some very radical and extensive treatment must be undertaken at once. Especially is this true in contract practice, the fellow workmen always being inclined to criticise if the case is not finished at the primary dressing, attributing it to lack of skill, or criminal neglect, the latter being especially the case with the local railway surgeon. We should work in harmony, and the surgeon at the hospital at every opportunity, impress upon the patient that he had most excellent treatment because the local surgeon did not undertake to do too much. In fact it will take a long time to educate the laity that the fu-

ture of an open wound depends *not upon what we put into it* but what we keep out of it.

After the surgeons have thoroughly agreed among themselves as to the proper course to pursue under these circumstances, it would then be advisable to have these points brought out very forcibly at the lectures on first aid, given to the employees. If they could be brought to understand that a few hours of waiting for favorable surroundings would be much better than to have work done under *unfavorable* surroundings, it would soon be that they would understand the importance of this procedure, and the local surgeon who did the first dressing would not have this unfavorable criticism to contend with, which would be a great aid to him in handling these cases.

As stated before, there should be frequent meetings of the employees and representatives of the medical department in order to bring about a public education on many matters pertaining to emergency and emergency dressings, and until this policy of not doing too much is adopted by the local surgeons, it will be impossible for the hospital surgeons to educate the pa-

tients, because this of necessity would be a criticism of the physician who did the primary dressing.

As an example of this thoroughly rooted belief among the laity that something must be done for the wound immediately it is received, we can all recall having these patients brought with everything used as a dressing, from a chew of tobacco to fresh cow manure. Yet by using every opportunity to educate them, and the medical staff being fully agreed in standing by one another, this practically can be gradually overcome.

In order to call attention to a few specific phases of the subject, in order to bring out the discussion, we will begin with,

First, Wounds of the Head and Scalp.

It is desirable that scalp wounds have immediate suture, however, any one that has not a razor or large scalpel with which to shave the parts, they are much better off, to simply clip the hair and apply a one to four thousand bichloride or other antiseptic dressing. Of course the scalp wound should never be closed without proper digital exploration of the skull, and if the surroundings are such that this can not be done, as stated above, it is much better to apply temporary dressings and undertake no more. When a scalp wound is received at the central hospital, already having been sutured, the surgeon there is relieved of all responsibility regarding the question of fracture, as he is not supposed to undo this work to make the necessary examination. For that reason, we must realize that without a careful digital and ocular

inspection of these wounds, one is very liable to overlook a serious complication. Then again, a scalp wound should never be closed by tying hairs over it in the absence of sutures, as this procedure is absolutely inexcusable if the case is to be sent to a hospital or other place for attention.

Bleeding of scalp wounds can practically always be stopped by applying sutures, these being of sufficient depth to take up all the layers, including the pericranium. As a general rule, unless the surroundings have been ideal, the wound small and clear cut, it is better not to seal scalp wounds with collodion. Of course if it is found that the skull is fractured there should be nothing done at the primary dressing other than clip the hair and apply antiseptic gauze until the patient reaches the hospital or proper destination, for final treatment.

For hemorrhage, not controllable by the sutures, one may apply a constrictor about the head for a short time, if the bleeding is severe. It is necessary in dressing these wounds, as all other open wounds, where necessary to do any scrubbing, that a piece of sterile gauze be thoroughly crammed into the wound while the shaving and scrubbing is going on, the shaving being away from the wound to avoid infection.

Second, Wounds of the Eye.

At the primary dressing in the field, one should not attempt any treatment of a wound of the eye except the removal of an easily reached foreign body, cleaning off the field carefully in the neighborhood, and putting on an aseptic dressing, and if either chamber of the eye has been punc-

tured, bandage both eyes in order to immobilize the injured one. If the injury is that of a foreign body, and it will be some hours before the patient reaches his destination, it is always well to use atropin, grains four to the ounce, early. A posterior synechia may be formed within twelve hours, which it may be impossible later to break up with atropin. In fact, when in doubt about the amount of reaction, after foreign bodies in the eye, be on the safe side by using atropin. This will add to the length of the disability but to the sureness of perfect recovery. Cocain for the removal of small foreign bodies from the eye should not exceed four percent in strength.

Third, Wounds of the Chest.

Incised wounds of the soft parts need not be treated differently from those of the same character in other localities. If the wound involves the chest cavity, about all that can be done outside of the hospital or operating room, is to pack the cavity to stop hemorrhage, and put on a heavy firm dressing. No incised or punctured wounds of the chest *should ever* be probed, only under rare circumstances, and that after the patient is in a locality where every aseptic precaution can be taken.

Wounds of the chest involving the large muscles should never be closed at the primary dressing unless the surgeon is prepared to properly suture the severed muscles or tendons.

Fourth, Wounds of the Abdomen.

This is one locality where the surgeon in the field is justified in undertaking a major operation under un-

favorable circumstances if he knows that there has been a wound in the bowel, or the patient is having hemorrhage from the liver, spleen or kidney, or if he has had a rupture of the urinary bladder. Of course with any one of these conditions, if he has to travel for ten to sixteen hours it will usually be too late for anything to be done at the end of that period. It would be a justifiable procedure in case of hemorrhage from one of the abdominal organs, to simply open the abdomen, pack or suture to control the hemorrhage, and not undertake to do more until the patient reaches the hospital. While on the other hand, if there has been a rupture or wound of the intestines, it is justifiable to undertake immediate suture if one can secure boiled water and can get what few instruments he has, and some towels, thoroughly boiled. In rupture of the urinary bladder, it would always be justifiable, simply to make an incision, put in a large drain, and put the patient in the Fowler position until he reaches the hospital. These cases must be rushed, and many times in such emergencies, cannot wait to get treatment after reaching destination following a long train ride.

Fifth, Wounds of the Limbs.

The primary act of either the laity present or of the surgeon present, in a wound of the limbs, is to undertake the control of hemorrhage. The first point here is to remember the anatomical fact that above the knee and above the elbow there is only one bone and the vessels can be readily compressed by a constrictor. This is a simple point, too often overlooked and even a very competent surgeon

will put a constrictor on below the knee and keep cinching it tighter, and wonder why he is not able to control the bleeding. The constrictors for the limbs should practically, without exception, be placed above the elbow and above the knee. Oftentimes a constrictor has been applied just above the wound in a crushing injury of the foot, and lower leg, thus remaining on ten to fourteen hours while the patient is being transported, and will by that time have so seriously interfered with the vitality of the flaps that the amputation will have to be done much higher than otherwise would have been necessary. If the patient is seen by a surgeon, the bleeding should be sufficiently controlled before he leaves the patient, that it will not be necessary for him to wear the constrictor, provided he will have to travel ten to twelve hours. If the constrictor is left on for these long periods of time, it is not only very painful to the patient, but this pain adds to his shock and often seriously interferes with the vitality of the distal parts.

After the hemorrhage is controlled, the next important question is whether or not to undertake in the field a primary amputation. This should practically never be done, more than to trim off the absolutely useless parts, if that may be done without giving an anesthetic or causing any great increase in the amount of pain. It is becoming more and more impressed upon the minds of those of the greatest experience in this class of work, that it requires the greatest amount of good judgment to know *when* and *when not* to do a primary amputation. As long as this is the

case by those of the most experience, in the best surroundings, it should therefore have all the more force with those of less experience in the most unfavorable surroundings. Of all classes of injuries, these are the hardest for the surgeon to leave alone with a simple aseptic dressing until they reach their destination. It is exactly in this class of cases that the over solicitous friends cannot understand why the doctor does not act immediately. Prevent shock by sufficient doses of morphine and atropin, to control the pain, and explain to the bystanders the fact that the patient is not now in the best condition for amputation, that the surroundings are not favorable, that his chances will be greatly enhanced, by waiting, and that the amputation will often not be done even after reaching destination, until the exact extent of the injury can be determined.

In other contused and open wounds that are sewed up at the primary dressing, other than the very smallest, —should be considered infected wounds, and free drainage provided for at once. It is a great mistake to sew these wounds up tightly as they will almost invariably have to be drained later, and the infection will be more extensive than if they had been properly drained at the beginning. All punctured wounds of the sole of the foot should be cocainized and *incised thoroughly* at the *primary dressing*. This is a point that I would like to call particular attention to, that in private practice is too often overlooked, and these punctures, and especially nail wounds are allowed to go until symptoms of infection present themselves. This is

certainly a great mistake, and the radical treatment should be adopted at the primary dressing. Poultices no longer have any place in the armamentarium of the surgeon, in open or punctured wounds. It is much better not to undertake to scrub the hands and feet of mechanics where there is lots of black grease, but the ultimate results will be much better to paint the parts thoroughly with iodine, and proceed with the dressing. Of course the average of us have not yet gotten our nerve up to the point where we can disregard the public's opinion in the matter, and pursue this rule invariably, but as stated before, we can gradually educate them to the point where they will understand that it is not neglect if the mechanic's hand is painted with iodine and not scrubbed.

During the scrubbing process, it is almost impossible to keep this dirty lather out of the wound, while in the painting process we do not have this difficulty to contend with. In practically all fresh open wounds we personally prefer the wet antiseptic dressing, 1 to 4,000 bichloride or saturated solution of boric acid.

Any wound of whatever nature or location should not be closed at the primary dressing, if one is not well and properly prepared to suture the tendons and nerves. It also goes without saying that so far as possible we should teach the laity not to give these injured people alcohol in any form, as is often done, so that by the time they reach the hospital they are thoroughly drunk and unmanageable, and take an anesthetic badly. We are now convinced that so far as the question

of primary dressings is concerned in emergency work, that the simplest possible plan and technique should be adopted, and to that end some of the leading railway surgeons of the country who have had the greatest experience, have almost reached the conclusion that emergency boxes on the trains should contain almost nothing but cotton and bandages. This may be a rather extreme view of the subject, but near to the same simplicity the medical department of the E. P. & S. W. Ry, has adopted the following emergency box, containing 9 1-oz. packages absorbent cotton; 2 jars 1-yard each, borated gauze; 10 3-inch gauze bandages; 5 1-inch gauze bandages—4 1-4 lb. packages baking soda; and pasted in the lid of this box the following simple directions:

FIRST: Do not wash fresh wounds. Apply cotton and gauze then bandage.

SECOND: Do not give an injured person whiskey. It often increases shock and leaves them in bad condition to take anesthetic when they reach medical aid.

THIRD: If bleeding BELOW knee, apply contrsictor ABOVE knee. If bleeding BELOW the elbow, apply bandage to stop it ABOVE elbow.

FOURTH: When the seal on this box has been broken for any purpose whatever, the box must be returned, upon arrival at the first terminal, to the division storekeeper to refill or exchange for a new box, which will again be sealed. This last requirement is imperative and must be strictly adhered to.

Some Unusual Surgical Experiences.

Dr. C. E. Husk. Santa Barbara, Chihuahua,
Mexico.

Read at the 2nd Annual Meeting of the Railway Surgical Association
of the Southwest, El Paso, Texas, October 20-21st, 1911.

Mr. President and Brothers in the
Bond:

Our sister Republic offers many opportunities for unusual experiences in every walk of life, and in every branch of the profession, and with your indulgence I will cite a few that I have had during the past year.

During our late unpleasantness we were fortunate enough to be located near the town where the first outbreak occurred, in Parral October 21st. In March Miguel Baca, the brother of Guillermo Baca, who started the revolution at that place, rode in one morning with 200 men and took the town. At 2:00 P. M. reinforcements arrived from Parral and two Federal soldiers were shot about 200 yards below the Hospital. Seeing the inscription on the building they came up to ask, as they expressed it, that their wounds be dressed so that they could continue with the troops. I was up town watching the battle, and my nurse, Miss Swanson, advised them to wait. They however insisted on being dressed, for they wanted to go on, and the spokesman asked that his companion, who was shot across the groin, be given attention first, which was done, and when his turn came,

and after he had been standing around unconcernedly all this time, she found a bullet hole just above his umbilicus, and finally persuaded him to go to bed.

There was quite a little excitement in town, so I didn't get back to the Hospital until about 9:00 P. M., which I found full of wounded who had made their way there, 25 in all. I decided to operate on this soldier first. He was then quite tympanic and very weak. On opening the belly at the median line I found and repaired two holes in the stomach, and four in the intestines. On attempting to dry the peritoneal cavity previous to closing there was still a great deal of bloody oozing, and searching for its source found a very much enlarged and friable liver, nearly torn in two, the lower lobe having a ragged furrow from side to side, the bullet lodging in the wall of the abdomen. Due to over indulgence in Tequila, the consequence of his military career, I found repair by means of a mattress suture in that Pate de Foie Gras liver very unsatisfactory, so that I was obliged to also pack to aid in controlling the hemorrhage. The case at this time seemed rather hopeless, as I had nearly performed an autopsy on

him hunting for his wounds, but knowing that the family would be pleased with a respectable looking corpse, he was sewn up, a large gauze drain left in, and a syphon left in his gall bladder, which I had also found ruptured. He left the hospital on the 18th day, well.

This wound was caused by the half jacketed, or mushroom bullet, used almost exclusively by the Maderistas, and in this connection I wish to call attention to the comparative destruction caused by this prescribed civilized warfare, full metal bullet, such as is used by the regular army, by presenting a bullet that completely shattered the ulna, entered just above the right groin, and was taken out at the lumbar region after having caused a great deal of destruction of tissue. This I think, however, was due to a very dirty rifle, the bullet having key-holed.

Frederico B. having lit the fuses for 26 loaded holes in the bottom of a 300 ft. shaft, Mexican style waited to light his cigarette before he signalled to be hoisted up. As a consequence of his "poco tiempo," the shots began exploding, the first of which knocked him out of the bucket, and the other 25 played toss up and catch with him, so that when he was brought to the hospital he sure did look some disfigured. A ragged tear extended from the point of his chin through the mouth to his eye; his lips were hanging in shreds, so that repair was a good deal like working on a dissected picture or map. The lower jaw was broken in three places, tongue nearly severed, both clavicles broken, one arm, the head of one scapula, one leg and four ribs, besides having numer-

ous cuts of lesser importance all over his body. He recovered, and is back at work, but does not smoke.

I was called to the telephone about 7:00 A. M. one morning, by the mine foreman, who informed me there had been an accident and wanted me to come up. I asked why he did not follow instructions and send the injured one to the hospital, but he informed me that he was afraid to move him; that the boy, though still alive, had part of his head torn off, some of his brains out, and he was afraid the rest of them would spill if he moved him. To prevent this calamity I went up and at the mouth of the drift found a man holding a 12-year old boy on his lap. The boy's head, following the usual Mexican custom, wrapped in a blanket to prevent air getting into his injuries and thereby contracting "pulmonia." I felt his pulse, found it normal and strong, unwrapped the blanket and saw that the top of his skull was missing; the entire brain mass exposed, covered only by the dura. He spoke and was as bright and intelligent as ever. On asking how it happened, I was informed that while he was riding on a motor car he stood up, a timber struck him, which not only scalped but sculled him as well. About a hundred feet from where he was I picked up a piece of his bare skull, ten by six inches, carried it in my hand down to the hospital, put it in a normal warm salt solution, had the boy put to sleep, as he was perfectly conscious, and started in.

I wired the bone in place and it fitted very well too; plastered what periosteum I could find to its original site, and repaired the very extensive scalp

wound. The boy did very well for six days; no untoward symptoms whatsoever; in fact sat up on a back rest; was very hungry, and perfectly normal.

A. "D. T." was brought in one night stabbed, and the little fellow was very much frightened, woke up later with nightmare, and imagined that the drunk was crazy and trying to torment him by holding a chamber over his head, which he finally succeeded in taking off, only to learn that it was his bandage cap. As a result his head became badly infected, for his mother had wrapped the family reboza around it until she called the nurse to replace the bandage. He died on the twelfth day from meningitis.

Whether due to a low or less highly strung, or less sensitive nervous organization, or to a stolidity inherited from their Indian ancestors, or a combination of all, we meet many examples that show evidence of very little shock commensurate with the injury.

A patient was sent in from a small mining camp, 150 miles over in the mountains, with the following meagre history:—

He was caught in some mill machinery, evidently entirely crushing all muscular tissue of his leg below the knee. As this was during the revolution, and the Doctor in charge of the camp had decided to make a visit to the states, no medical assistance was to be obtained other than that given by a Mexican Curandero, and you who live among Mexicans know what this means. I found the entire leg bare, the bones exposed and dried, all tissue having sloughed away from the knee down, with the exception of the foot,

which still adhered, resembling a piece of polished ebony. He complained of no pain, was in fair physical condition, but said that he wanted his bad parts removed, as it smelled so he didn't enjoy his meals. He could sit up and handle that skeleton leg nearly as well as an ordinary one, so I took him out in the yard, snapped him, a copy of which I present, afterward amputated his leg at the middle third of the thigh, and had perfect recovery in four weeks.

According to Mexican law it is of vital importance to produce the *cuervo del delito* or cause of the crime, and as I act as County Physician and Coroner, it is my duty to perform autopsies on the remains of all who come to a sudden end. In trying to form an opinion of the probable location of a bullet, judging from the point of its entrance, I find it almost useless, and as the authorities have captured and arrested the corpse it is still necessary to find the bullet, that it may be used as evidence in convincing their superiors, and the Public, that they have done their duty. It is up to me to hunt until I find the bullet, and many times I have thought that the simplest way to do so would be to run the body through a sausage grinder; screen it, and make a test of the mess for lead. I call to mind two cases illustrating the difficulty in locating the projectile.

One of the very few attempted suicides I have encountered in Mexico was that of a young rancher who placed the muzzle of a 38 in his mouth and pulled the trigger, he was brought in perfectly conscious; three or four front teeth missing; a jagged hole through the middle of his

tongue; his entire mouth beautifully powder burned, but presenting no other symptoms. He was put to bed, given a mouth wash, and in a few days remarked that he felt a sore place behind his ear. On examining I detected a small lump, on which I cut down and removed a very much deformed bullet from his mastoid.

A lady of easy virtue strayed from her line of duty, and was shot by her abused lover for not turning over enough cash to properly support him in his accustomed manner. The bullet entered the gluteal region with

a supposed direction upwards. She however, presented no particular symptoms, and after a few days in bed went back to her work. While engaged in helping support the family her employer complained of another foreign body interfering with his work, and having paid for the exclusive rights for the use of the property at that time, demanded an explanation. Suspending active operations she put her fingers up in her vagina and felt a hard lump on one side, which proved the next day to be the bullet, which I extracted from just under the mucous membrane.

THE TONSILS.

An Illustrated Paper read at the Thirtieth Annual Meeting of the New Mexico Medical Society at Las Vegas, September 8th, 1911.

By E. R. Carpenter, M. D., El Paso, Texas.

No subject in medical literature has received more attention than the tonsils, and it would seem that not only the specialist, but every general practitioner would be familiar with all the phases of this subject. However, it is not unusual to find that some of the best men in the profession do not realize and appreciate the vital importance of these glands. The lymphoid tissue encountered all along the digestive track. It does not apparently belong to the class of glands that have a characteristic function, as the thyroid, pancreas, the testes, the ovaries, etc. In childhood the tonsils are relatively larger than during any other period of life, and they are during childhood more sus-

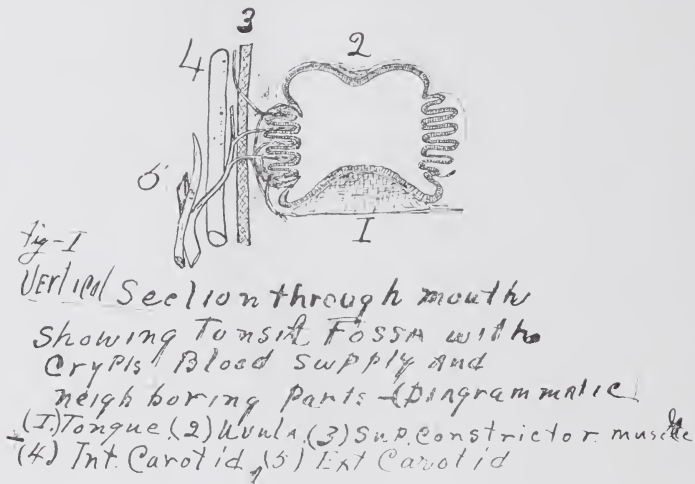


Fig. 1.

importance these glands exercise over the human system from a pathological consideration. The true function of the tonsil, if there is any special function, has never been demonstrated. It develops from the wall of the second visceral cleft, and belongs to the lymphatic system, and is of practically the same structure as

ceptible to pathological changes. After about the twelfth year the normal tonsil undergoes atrophic changes, so that in adult life there should be but little of the tonsillar element left. Whatever the function of the tonsil may be in health, it is of little importance, while the diseased condition of the gland produces on the whole more

trouble than the combined convenience and misery of several of the popular diseases, as appendicitis, gall stones, mastoiditis, etc. Some conditions, as chronic sore throat, otitis media, deafness, nervousness, laryngitis, peritonsillar abscess, rheumatism, impediments of speech, impaired develop-

higher civilization. Savages and wild animals are said to rarely have these troubles in their natural state. Our mode of dress, living in houses, having fires and unsanitary conditions are no doubt responsible for the prevalence of this trouble in the human race, while it is at times the end result



Fig. 2.

Horizontal section through Tonsil, showing crypt and portion of superior constrictor muscle.

ment of any or all parts of the human body, are daily met with, as results of tonsillar affections. Probably fifty per cent of children have pathologically enlarged tonsils, yet not in all of these is there any apparent disastrous effect. It seems that enlarged tonsils are one of the penalties of

of such diseases as diphtheria, measles, scarlet fever, etc. From a close observation of over two thousand patients in private practice, coming to me with some form of tonsil disease during the last ten years I am certain there is produced in the human body by these



Fig. 3.

Horizontal section through a chronically enlarged tonsil, showing capsule, crypts compressed and full of caseous material—removed properly.

glands, some disturbing factor affecting the metabolism, which often prevents proper development of childhood, and is frequently a source of great inconvenience to the adult. Most of these cases have been in children from four to twelve years of age that were not developing properly, were deficient in weight, complain-

ed of lassitude, impediments of speech, anaemia, etc. In many of these cases, no doubt the disturbing factor was some toxine, developing from the enlarged and diseased tonsil, while in others, the trouble was mainly through mechanical obstruction from the large tonsils and adenoids, producing a deficient

oxidation of the blood. In fifteen hundred of these cases operated on for removal of diseased tonsils, not one case has shown any apparent detrimental effect, while in 99% at least a remarkable beneficial result has been noted, and in many, the transformation has been so marked, that one would hardly know the child as the

mal or hypertrophic tonsil, and I have seen several cases who have had their tonsils removed years ago during childhood, or have had atrophic tonsils for many years and had no sign of otosclerosis. It is usual to consider that enlarged tonsils protrude into the oral cavity, being easily seen upon inspection. However, it is my obser-



Fig. 4.

Horizontal section of enlarged tonsil, removed improperly.

same one a few weeks or months afterwards. One or two writers have noted a condition of deafness, known as Otosclerosis, occurring in people with atrophic or entire absence of the tonsil. However, I am positive this was purely a coincidence in the cases they mentioned, as I have seen several cases of otosclerosis with nor-

vation that there are more enlarged diseased tonsils not readily seen than otherwise, unless the patient is made to gag, thereby pressing the tonsil forward against the pillars of the fauces, or by palpating the gland with the finger. No doubt a great many children suffer from affections arising from diseased tonsils that are

considered by their family physician as having normal tonsils. This condition is produced by an inflammation at some period, whereby the pillars, which in a normal condition partially cover the tonsil, become adherent to the oral surface of the gland, or the gland is so large it cannot protrude

effects than the large protruding one. Not being seen, it is neglected, the adherent pillars prevent a proper secretion from the Crypts, consequently the 'toxine, either from the secretion of the gland or from the contents of the Crypts is absorbed, producing an enlargement of the cervical lymphatics.

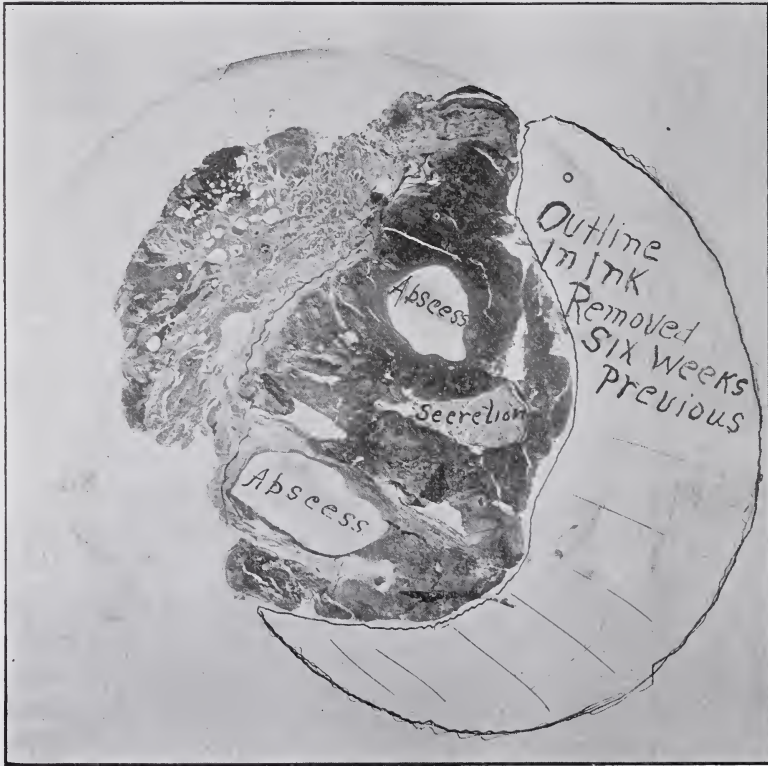


Fig. 5.

Horizontal section through tonsil, showing frequent condition after incomplete removal.

through the orifice of the pillars, consequently, the enlarging gland gradually presses backward and upward, displacing other tissues of the tonsil produces more disastrous effects than the large protruding one. neck and soft palate. This form of tonsil produces more disastrous

This toxine and the pressure of the enlarged glands on the nerves and blood vessels of the neck, no doubt produces in some cases results often attributed to other causes, while also in some cases the pressure upwards of the tonsil against the eustachian tubes, produces various forms of middle ear

trouble. There are other forms of chronic tonsillar trouble than the hypertrophic variety, but they are rare in comparison, especially in children, while periodic enlargement of the ton-

form of a tonsillotome, or by using the actual cautery. All these methods usually leaving some portion of the tonsil behind, this remaining portion may in some cases be converted into

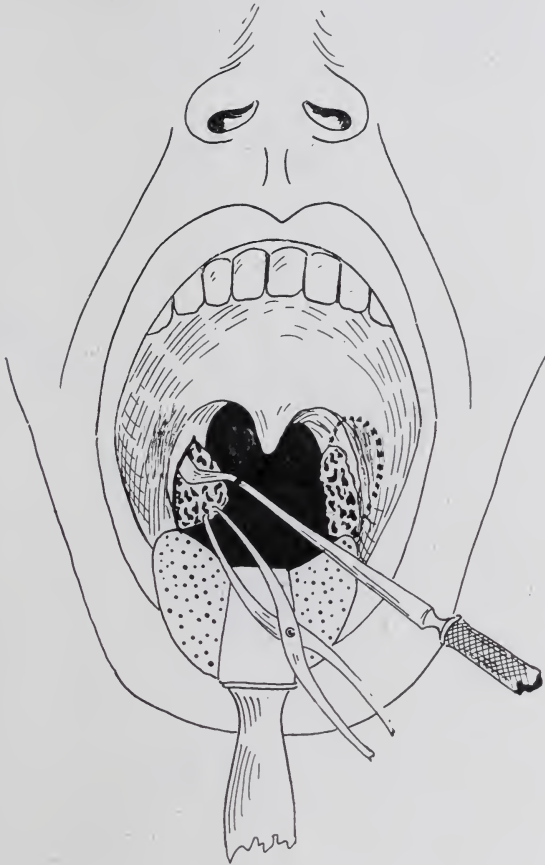


Fig. 6

Illustrates Winter's method of freeing the gland from the pillars and making initial incision to get behind the tonsil—Varying the angles as to condition encountered.

sils occur so frequently in some people that it becomes as great or a greater nuisance than the hypertrophic variety. In former years it was the usual custom to cut off a portion of the protruding tonsil, either with some

some form of submerged tonsil, or a chronic aggravated caseous tonsillitis results. (See Fig 5.) From a practical standpoint, the tonsils may be considered under two headings:

I. Pathologically enlarged ton-

sils, either chronic or periodic.

II. Chronically enlarged, but not protruding, or some form of cicatricial or caseous tonsilitis.

These conditions will be better understood by considering briefly the anatomy of the tonsil region. The normal tonsil measures about one half by

proximity to the superior constrictor muscle of the Pharynx, this muscle being situated between the tonsil and the internal carotid artery. The blood supply comes from several small vessels in the surrounding tissue, as the tonsillar artery, a branch of the ascending palatine, a small branch from

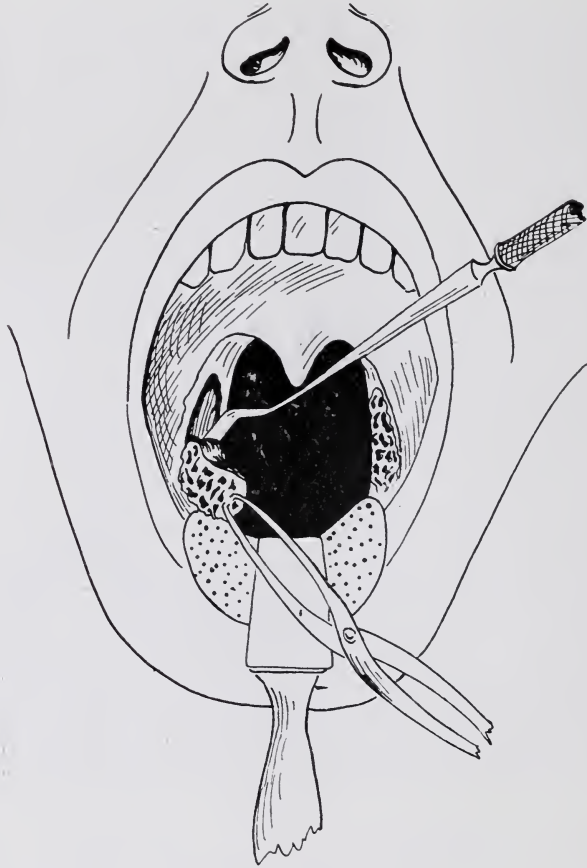


Fig. 7.

Method of using the knife after getting behind the gland.

one third of an inch, it lies in the tonsillar fossa, which is formed in front by the anterior pillar (palatoglossus muscle) and behind by the posterior pillar, (palatopharyngeus muscle) and laterally by a fibrous sheath lying in close

the lingual, the ascending pharyngeal from the external carotid, the descending palatine from the internal maxillary, being the principal sources of blood supply. The tonsil has some twelve or fifteen Crypts extending

deep into the gland. The mucous membrane covering the oral portion of the tonsil and lining the Crypts continues on to the pillars and base of the tongue. The tonsil is not closely adherent to the lateral wall, so that in the normal condition it is loosely held in the fossa by a thin rim of mucous

disease in any of its forms, it is almost invariably advisable to thoroughly remove the diseased glands, of course it being understood that most all children with chronically enlarged tonsils, also have adenoids. The exception to operating on enlarged glands is where specific trouble is the causative factor

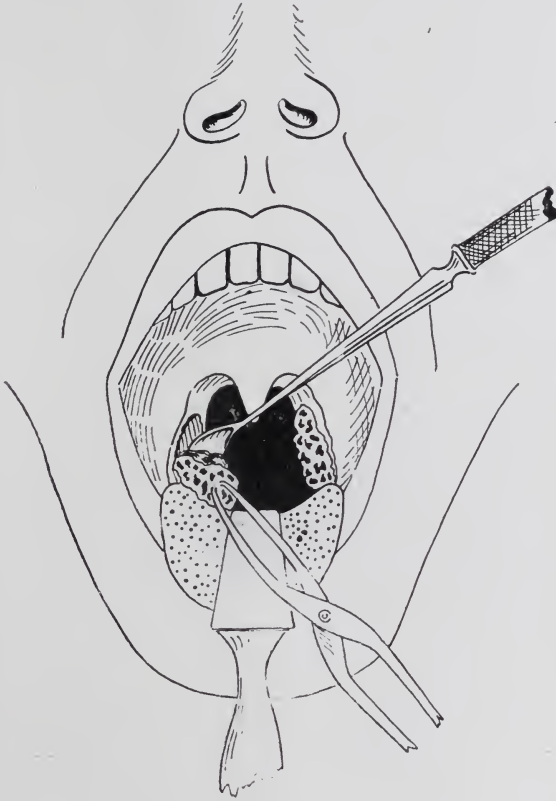


Fig. 8

Using reverse end of instrument after initial incision has been made.

membrane and fibrous tissue, passing from the tonsil to the adjoining tissue. In enlargements of the tonsil, both the lymphoid and the supporting tissue may increase, either may predominate over the normal relation.

Where a child or an adult is troubled with periodic or chronic tonsillar

or too soon after an acute inflammatory reaction. In most of these cases, unless the glands are completely removed, the desired results are not obtained, consequently, the old method of using the guillotine, cauter, etc. are not now used, especially in America, by authorities on this subject. (See

Fig. 4). Some form of enucleation whereby the entire gland **with its capsule** is removed is the ideal operation. (See Fig. 3). This is not always an easy operation and should not be attempted by any one not thoroughly familiar with this class of work.

permanent damage to the voice and swallowing. Such injuries should be carefully avoided. These complications occur frequently with the tonsillotome, cautery, etc. In fact, I have seen some of the worst results following the use of the guillotine. The

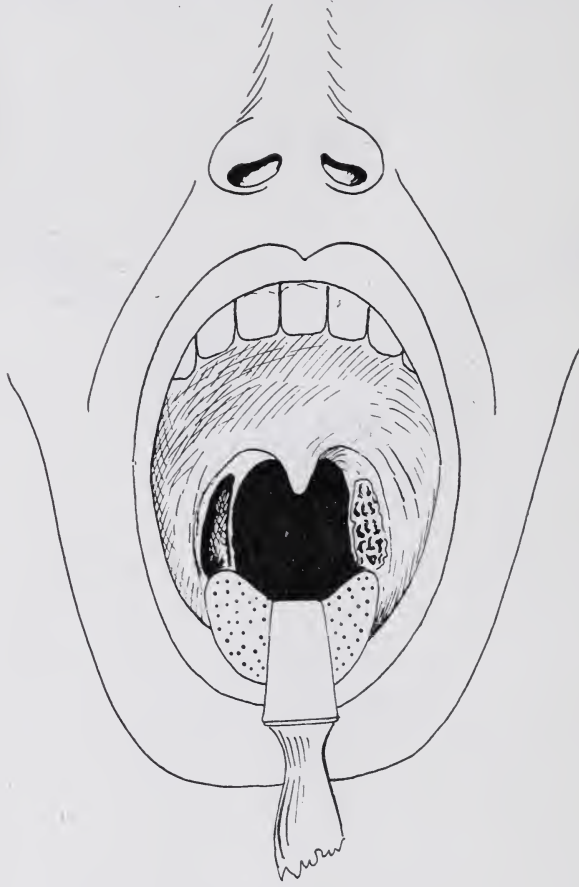


Fig. 9.

As the field of operation should appear after removal.

Some cases are *very* difficult to remove. Hemorrhage is at times quite profuse and sometimes alarming and if not properly cared for death may occur. Injury to the pillars and soft palate often results in contraction with

method now employed by me, as described in the 1911 Transactions, Otolaryngology and Laryngology of the American Medical Association, for removing the tonsil; is as follows:

I use general anesthetic in children

but more frequently local anaesthetic in adults. Some form of mouth gag with the combination tongue depressor is preferred in most cases where general anesthesia is used. The other instruments necessary is some form of straight grasping forceps as the Jacobs Volsellum forcep, a long hemostat, or any good tonsil forcep, and a combination knife and dissector sold by the instrument houses as my instrument, especially is it useful in enucleating badly submerged and adherent tonsils. It is necessary to bear in mind the following points in using it:

I. Pressing the tongue well down, free adhesions between the anterior pillar and the tonsil by inserting the knife end, as it will naturally suggest itself, then grasp the tonsil firmly with the forceps as near the upper portion as possible, pull down and in so as to bring the gland well out of the fossa.

II. Keeping up the traction, insert the knife end at the upper outer por-

tion between the pillar and gland the *concave side facing up*, the angle of insertion being governed by the size and appearance of the tonsil. If care is taken to keep above the tonsil tissue it is easy to note when the capsule is penetrated (or behind the gland), enlarge the opening slightly and then turn the knife over, *or re insert*, so that the *concave side* fits closely about the gland, carefully dissect around and behind the tonsil, being careful to keep the posterior pillar intact. When down to the base, the knife end may be used to finish or the ends of the instrument may be reversed and the spoon shaped end may be used to advantage. In many cases, it is advisable to use the spoon end after making the initial incision through the capsule.

The instrument should not be too sharp, just sufficient to cut without too much force being used. If too dull, it is made so it can be easily sharpened. Bleeding is more profuse when *very sharp* instruments are used.

GONORRHEA IN THE FEMALE.

Evelyn Fisher-Frisbie, M. D. Albuquerque.

Read before the 30th Annual Session of the New Mexico Medical Society East Las Vegas, N. M., September 6-9th, 1911.

When "His Majesty", the American citizen, once enters his palace,—the female genital tract, he has usually come to stay until he and his hosts have reduced the wonderful and intricate abode to ruins. Since our battle against him is so likely to be futile, carried on as it is, from the exterior, while he has the vantage ground, it behooves us to guard with more zeal his original entrance into the palace.

When we consider the ravages of this disease at the very fount of life, the large percentage of women who are chronic invalids and the enormous number who are sterile as a result, and that thirty per cent of these are infected through their husbands, largely through ignorance of the nature of the disease and its infectious possibilities in the chronic stage, we realize the importance of educating the people as we are doing in tuberculosis. "Oh, what men do, what men dare do, what men daily do, not knowing what they do."

Prince Morrow, in the preface to his book "Social Diseases and Marriage," says "Within the past two decades the coccus has so grown in significance and pathogenic importance as the coccus of Neisser. Of a special interest in connection with the ob-

jects of this study is the important role of the gonococcus in determining serious pelvic disease in women. Modern science has taught us that in view of its extensive prevalence, its conservation of virulence after apparent cure, and its tendency to invade the uterus and annexial organs, with results often dangerous to life and destructive to the reproductive capacity of the woman, gonorrhea overshadows syphilis in its importance as a social peril."

He states as the object of his work, "To set forth the dangers introduced by venereal disease into marriage—dangers to wife, dangers to offspring and dangers which come from their morbid irradiations into family and social life—and to indicate the most effective means to prevent these dangers or to limit and circumscribe their spread. This protective duty which has for its object the preservation of a helpless and innocent from infection devolves upon the physician in his capacity as sanitarian and guardian of the public health. The fulfillment of this duty realizes the highest ideals of preventive medicine."

The campaign of education carried on by the anti-tuberculosis association should be a hint to follow a similar line, altho we have here the prob-

lem of overcoming of that spirit of false modesty and popular prejudice against any knowledge of these subjects being brought to youth and innocence, under the misconception that ignorance means virtue. In combating this situation we are confronted with the most delicate psychological problem with which we have to deal. Just so long as girls are allowed to mature and even marry in ignorance of the anatomy and physiology of the most important function of their bodies, and so long as boys learn from street gamin that gonorrhea is no worse than a common cold and that illicit use of the sexual function is necessary to health, there will continue to be carried to the marriage bed the seeds of certain destruction of the very foundations of the family. We are all too familiar with the extremely frequent cases of marital infection from an old gleet in the husband leading to serious acute disease in the wife and later to her chronic invalidism and often sterility or the sacrifice of her womanhood on the operating table.

Moral law as a rule, has some physical foundation, and teachings which appeal to indefinite religious motives are almost certain to be unheeded, while a wholesome fear of a certain hell here and now, from a real and physical cause is not so likely to be disregarded.

Prince Morrow (1) discusses at length ways and means of bringing these matters before the public. He says we should enlist in this socio-sanitary work of prophylaxis, the co-operation of heads of schools and colleges; of the clergy; of jurists; of sociologists; of philanthropists, and

public-spirited men generally. These should form a special society known as "Society of Sanitary and Moral Prophylaxis." It should be a center for the diffusion of enlightenment—a medium of communication—between the profession and the public. Its first effort should be to break down the solid wall of opposition to the diffusion of such knowledge, and the difficulties, apparently insurmountable, disappear before intelligent efforts to combat them.—S.

Later he succeeded in forming such a society, The American Society of Sanitary and Moral Prophylaxis, before which he presented a paper at a joint meeting with the Medical Society of the County of New York, April 24th, 1911.—N. Y. Med. Jour. July 11th, 1911.

Another phase in this prophylactic work, viz., government control, is ably presented by Howard Kelly (2) who says there are three possible attitudes toward the social evil:

1. Indifference.
2. Government Control.
3. Active Personal Crusade Inspired by Sense of Personal Responsibility.

The first has been tried and found wanting. With the objections to the second we are all familiar. In the third lie his hope of the future, and it means that we shall recognize our individual responsibility toward all whom we can influence, laboring in season and out of season to inculcate good morals with physical reasons warning them that the penalty of sin is death.

We come now to a consideration of the disease itself. We will say that

the patient presents herself at the end of a week from the time of infection with the typical profuse creamy discharge flowing over the vulva, with perhaps a gland of Bartholin forming an abscess, and the usual frequent micturition with much burning and irritation. The case may be one in which there can be no possible doubt as to the presence of the specific germ, but it is always wise to safeguard the diagnosis in view of possible legal complications by taking a smear of two cover glasses, since the examination is the simplest made. The fixing and staining a half minute with methylene blue and one glimpse through the microscope tells the tale and gives you a weapon in court which can be preserved and which cannot be contested. If the case is more doubtful and we wish to use the Gram stain, Crossen (3) has given us a modified and shortened process as follows; omit fixation and flood cover glass with a two per cent solution of crystal violet in methyl alcohol for fifteen seconds. Wash off slowly with distilled water drop by drop for ten seconds, then quickly. Flood cover glass with the following solution:

Iodine, 1 gram.

Potassium iodide, 2 grams.

Distilled water 100cc.

Allow to act fifteen seconds. Pour off and wash in 95 per cent alcohol quickly, then slowly for ten seconds. Wash well in water and mount. Gonococci will be decolorized, as they are gram-negative.

Now let us see what we can do to ameliorate the acute symptoms and possibly limit the hideous course of the disease. Text-books always tell us to avoid carrying infection from the

vulva to the vault of the vagina, but I have never yet seen a case in which it had not already reached this point. I first cleanse the external parts by irrigating with an efficient antiseptic solution and proceed to cleanse the vault by a large douche of the same solution. There are many substances in common use for this purpose but my personal favorite, from the standpoint of efficiency, convenience and cheapness, is a mixture of equal parts of carbolic acid and formaldehyde, of which I use a teaspoonful to a quart of warm water. Potassium permanganate has long held the field as the most useful substance for this purpose but its staining qualities are certainly a disadvantage. Some years ago I used for some time at great expense a solution of acetozone which is a most efficient preparation, but the high price is a great disadvantage and probably the other does as well. After the douche, which should be at least a gallon in quantity, a speculum is introduced and the condition of the cervix investigated. We may find it free from invasion, in which case we may possibly succeed in keeping the disease below the danger zone (the internal os). Above all things, never pass a sound or applicator through the internal os unless the uterus is certainly infected. There are various substances used for painting the vaginal wall, most of them silver salts, argyrol, protargol and silver nitrate being the most commonly used, of which my favorite is argyrol in twenty-five per cent aqueous solution. This should be done in a most thorough manner, including every fold of the vaginal mucous membrane, and followed by packing with a gauze

or wool tampon saturated in a twenty per cent solution of ichthyol and glycerin or a ten per cent solution of argyrol. This tampon should be long and slender and packed into the vault with the patient in the knee chest position in such a manner as to obliterate every fold of the vaginal mucous membrane. This should be allowed to remain for a period of eight to twelve hours when it is removed and followed by the same douche with preceded the treatment and should be repeated every eight hours.

A new method of vaginal treatment, devised by Dr. Gies and mentioned by Dr. Polak (4), which will be published in the form of a monograph shortly, consists of introducing through a tubular speculum after thorough cleansing of the vagina one to two ounces of a solution of argyrol (percentage not stated), then packing with a wad of guaze soaked in a saturated solution of picric acid in glycerin. After three to five treatments the controls come back clear of gonococci. A series of one hundred cases is reported in which gonococci in pure culture had been found. This looks very promising and we hope later reports will confirm its efficiency.

The treatment in this acute stage should always be carried on in a hospital with complete rest in bed, repeating the vaginal treatment every twenty four hours and the douches every eight hours. When these ideal conditions cannot be obtained, as is more frequently the case, we must approach them as nearly as possible. It is here we should take the most pains to make the patient understand the importance of perfect co-opera-

tion on her part by showing her the future probabilities of the disease in case of neglect at this stage. The question of acquainting her with the real nature of the disease is one of endless discussion and our course in each case must be determined by its individual circumstances, and it requires a large amount of tact to choose the right one.

We have not yet finished our first office consultation.

The vaginal treatment finished, if there be an abscess in Bartholin's gland it should be freely incised after injecting a little local anesthetic.

The urine next claims our attention, and the medication will depend upon the degree of severity of the symptoms. degree of severity of the symptoms. Hexamethylenamin should always be an ingredient with some substance combined to change the acid reaction to alkaline. Methylene blue is a very useful drug during this stage of irritation and oil of copaba and santal are frequently used.

In the hygienic treatment the important points are rest in bed or nearly so with a light non-irritating diet, chiefly milk being the ideal one.

Much work has been done during the past several years experimenting in the serum and bacterin treatments, but the results have usually been disappointing during this acute stage. However, Dr. Hamilton (5), in the Presbyterian Hospital and Vanderbilt Clinic, reports more speedy cures in children under bacterin treatment during this stage. My own experiments with the disease in children accords with these results. Dr. Ruth Vail, in a report before the Chicago Medical Society (6), of seventy

cases divided into six classes in which different treatments were used, reached the conclusion that the best results were obtained from the vaccine and serums. The vaccines, she said, have certain advantages over serums in the smaller doses and less reaction and a longer interval between injections. Their preparation is also more simple.

As the more acute symptoms subside a little rigidity in regimen may be relaxed and the vaginal treatments and douches reduced in frequency but continued at lengthening intervals until the discharge has disappeared and the tract is free from gonococci.

If the case was seen early and conditions for treatment have been favorable, we may have been able to keep the infection below the danger zone, but if, on the other hand, the infection has gained entrance to the body of the uterus we feel like throwing up our hands for we see ahead only the celebration of pan-hysterectomy, as this is the usual finish.

However, it is possible to do much to limit the inflammatory reaction in the uterus and adnexa, chiefly by rest in bed and knowing when to do nothing in the way of surgical interference. Applications of ice to the abdomen, hot vaginal douches, swabbing the uterine cavity with tincture of iodine or argyrol followed by depleting suppositories in the vagina constitute the principal line of treatment in the acute stage. If, as occasionally happens, the infection is so virulent that the tubes do not have time to agglutinate and the infection passes into the pelvic peritoneum we may have a serious peritonitis to deal with, and it

should be treated along the same general lines as peritonitis of any other origin, viz, rest in bed with starvation diet, enteroclysis of normal salt solution, etc.

The chronic stage is properly a surgical condition and for the most part should be treated as such. But we all have cases which must be treated palliatively owing to inability or unwillingness of the patient to submit to surgery. In these cases I have secured the best results by using galvanic electricity—positive pole attached to a copper ball vaginal electrode with negative pole over the abdomen—followed by iodine and ichthyol vaginal treatment. This has given me much better results than the depleting treatment alone.

The chronically inflamed uterus is sometimes benefitted by careful dilatation under anesthesia and curetage followed by a course of intra uterine applications of nitrate of silver, five and ten per cent solutions.

When surgical procedures are instituted the radical operation of the removal of both tubes and ovaries and the uterus is the only one to be considered. Surgeons in this country and abroad are rapidly concurring in the opinion that it is bad surgery to leave the old chronically infected uterus or one tube, as either is sure to give future trouble.

References:

- (1)—*Jour. A. M. A.* Mar. 4, 1905.
- (2)—*Jour. A. M. A.*, Mar. 4, 1905.
- (3)—“*Diagnosis and Treatment of Dis. of Women.*”—Crossen.
- (4)—*Amer. Jour. Obstet.* Mar., 1911.

GASTRIC ULCER.

Elliott C. Prentiss, M. S., M. D., El Paso, Texas.

Read before the Bernalillo County Medical Society, Albuquerque, N. M.,
December 20th, 1911.

Gastric ulcer is of great importance to both the surgeon and internist. It not only impairs a person's enjoyment of living and ability to accomplish his daily duties, but in the later stages is a constant menace to his life through hemorrhage, perforation, and tendency to cancer formation. The loss of vitality from a long illness of this nature predisposes to many other diseases, and tends materially to shorten the patient's life. I have at present a patient of 45 years of age under my care who, one and one half years ago had a gastro-enterostomy performed for gastric ulcer, with only temporary relief. She evidently had had the condition only two years before operation. She has aged very decidedly since the beginning of her illness and now appears to be about 57 years old.

Gastric ulcer is far more common than clinical statistics would indicate. The most accurate statistics are those obtained from a large number of autopsies performed on patients dying from all causes. These should include both healed and unhealed ulcers. Rutimeyer, quoted in Elsner's work, gives the following figures taken from routine autopsies:

Russia .8%.
Switzerland 2.6%.
Austria, 4%.
(Bohemia, Poland)

Germany 4%.
England 4%.
Denmark 16.7%.
North America 1.3%

Bassler states that in 59,450 autopsies healed or unhealed gastric ulcer was present in 4.4%. The following is quoted from Charles F. Martin in Osler's Modern Medicine "Pathologically these ulcers" (duodenal) "are found in 0.297% of all autopsies—i. e. 232 cases out of 78,000 autopsies (combined statistics). The proportion of gastric to duodenal ulcers, which according to statistics is ever increasing because of surgical findings is perhaps 1 to 1. Former statistics give 6.6% of all peptic ulcers, but this is certainly far too low an estimate, and surgical experience bears this out each year, more and more. In 1906 Mayo had found the proportion 2 in 5. Of his last 200 cases operated upon (1905—1907), 98 were duodenal and 87 gastric, while 15 were independent of each viscus. The statistics, as far as I know, do not give the relative frequency of healed and unhealed ulcer present. The relative frequency of gastric and duodenal ulcer is not stated in the same set of autopsy figures.

This brings up an interesting question—What is the relative frequency of gastric and duodenal ulcer? Strum-

pell states in his "Text Book of Medicine" that "duodenal ulcer is much rarer than gastric ulcer." I could not find anything in Moynihan's work on "Duodenal Ulcer" about statistics on this subject. Is Mayo right, and are 75% of gastric and duodenal ulcers in the duodenum, or does that apply only to operative cases? In a hospital where I studied pathology, there were fully 600 autopsies performed in a period of 3 months. I did not make statistical records, but am perfectly sure that there were fully two gastric ulcers to every duodenal ulcer. A number of the gastric ulcers were healed, but I do not remember seeing a single healed duodenal ulcer. I present to you for examination microscopical slides made from a duodenal ulcer taken from a woman who had died from other than a digestive disturbance. She had two large duodenal ulcers, one of which had perforated into the pancreas. The family stated that she had never had indigestion. The ulcers were evidently of long standing, and there was no stenosis.

Of the cases of gastric and duodenal ulcer that I have seen in the last three and a half years, 33 1-3% only were in the duodenum. These cases were carefully studied, and some were verified by operation. This represents, I believe, the average clinical experience of internists all over the country. I believe that duodenal ulcer does not heal permanently nearly as readily as gastric ulcer, and that a larger proportion of the total number of duodenal ulcers come to operation than of gastric ulcers. This, in my opinion, explains Mayo's operative findings.

I do not wish to minimize the value of the highly scientific work being

done, but do not believe that operative findings, in this instance, should offset the results of thousands of routine post-mortems. Operative cases are the obstinate and severe ones only, and should not be depended upon to give figures to cover all cases.

Moynihan says that when a person has had several attacks of duodenal ulcer, the condition cannot heal without stenosis, which would provoke further breaking down of the ulcer. He says that obstinate cases of hyperacidity and acid gastritis are duodenal ulcer which do not permanently heal, and that chemical analyses of the gastric contents show that hyperacidity does not exist, and that his operative experience has confirmed this opinion. That seems to me to be an extreme view.

A very interesting point that McCarty, of Mayo's Clinic, brings up is the development of cancer cells in chronic gastric ulcer. He says that in 68 per cent of ulcers resected areas of carcinoma were found. That is a very important statement, and the question naturally arises—How long had these ulcers been carcinomatous? They presented no gross appearances of carcinoma. Does this not give us a valuable suggestion with regard to treatment in those cases that resist medical attention? On this account resection would be better than gastro-enterostomy, where feasible, in spite of its higher mortality. Many severe cases of gastric ulcer of long standing have made a permanent recovery following a gastro-enterostomy, some of which must have been complicated by the presence of latent carcinoma cells.

The differential diagnosis of gastric ulcer is, in many cases, exceedingly difficult. A very careful history must be taken. With symptoms pointing to the stomach, the finding of traces of blood in the stomach contents or faeces is of a great deal of importance. Sources of error must be avoided, of course, such as bleeding from the nose, mouth, and rectum. The stool examined should be from a meat-free diet, and drugs stopped. The best tests are the guaiac, aloin and benzidin. Jaworski and Karolewicz claim that the delicacy of the guaiac test is 1 to 25,000; Hartman claims 1 to 200,000; C. F. Martin 1 to 1,000. D. M. Cowie (Am. Jour. Med. Sc., March, 1907) tested its delicacy on blood and stool mixtures, and after the ingestion of blood.

With the blood and stool mixtures the results were as follows:

With turpentine oil positive with .004 per gram faeces.

With H_2O_2 positive with .003 per gram faeces.

With Cowie's water method positive with .00035 per gram.

With the blood ingestion experiments the results were as follows:

With turpentine oil 200 grams blood ingested result negative.

With H_2O_2 1.00 gram blood ingested result positive.

With C's water method 0.5 gram blood ingested result positive.

Cowie's water method of doing the guaiac test is as follows:

Extract the faeces with acetic acid and ether, add an equal amount of water to the ether extract, a little guaiac, shake and add 30 drops of old oil of turpentine; shake again and let it stand. If positive, a light blue color develops in the upper fluid. From his experiments it would seem that the delicacy of his method is about 1 to 3,000. Greef states that the delicacy of the benzidin test is 1 to 120,000, and Walter puts it at 1 to 250,000. It certainly is far more delicate than either of the others.

The frequency with which occult bleeding occurs in gastric ulcers given by the various authors as follows—Elsner "At the highest 50%." Boas 58.3%. Rutimeyer,—In the stomach contents 13 times in 35 cases, or 37%. In the faeces 8 times in 19 cases, or 42%. Bassler—"its presence" (Occult blood) "is noted in the faeces in about 30% of the cases" (gastric and duodenal ulcer). Graham and Guthrie state that in 250 cases of gastric and duodenal ulcer, blood was present in the stomach contents in 40 cases.

CONCLUSIONS—(1). The relative number of duodenal and gastric ulcers found in a large number of routine post-mortems is about 1 to 14.

(2) Surgical findings, as indicated by Mayo's figures, are 3 to 1 in favor of duodenal ulcer.

(3) This apparent discrepancy in figures is explained by the fact that a much larger proportion of duodenal, than gastric, ulcers come to operation.

CONSERVATIVE SURGERY.

By James Vance, M. D., El Paso, Texas.

Read before the 30th Annual Meeting of the New Mexico Medical Society
East Las Vegas, N. M., Sept. 6-9th, 1911.

The true aim of surgery is not to perform some operation, be that ever so difficult or interesting as it may, but is to accomplish such a condition of the patient as will most nearly approach a normal degree of health. No surgeon should ever lose sight of the fact that he is laboring to cure the patient and not solely to cure the disease.

With this idea in view it has become the law of surgery to do no more injury to an organ than is absolutely necessary to effect a cure. Some organs are more necessary to the welfare of the body than others, and consequently demand more conservative treatment. Judging from the number of oophorectomies we have all seen done, especially several years ago, and unfortunately occasionally yet, in which ovaries were removed that were entirely normal, or so little diseased that a slight plastic operation would have sufficed, we would think that the ovaries were not necessary to health and well being of the patient. On the contrary, the ovaries are the essential organs of a normal woman and are just as essential to her as testicles are to a man, and the reason of their abuse in the past is because they cannot be seen, and through ignorance of the possessor. The fallopian tubes are secondary to

the ovary in that they are merely the conduits through which the ovum is transmitted to the uterus to be impregnated, but the ovaries are essentially necessary:—

FIRST. Because without them there can be no procreation, which is apparently woman's prime reason for existence, and the natural instinct of motherhood is so strong in woman that she is never quite happy when the possibility of motherhood is removed from her.

SECOND. It has been proven that the ovaries have an internal secretion necessary to the welfare of her organism, and a sudden withdrawal of these hormones from the body, as after a double oophorectomy, always upsets her nervous stability, causes her system more or less trouble to regain its equilibrium, and often makes her a nervous wreck. These symptoms of greater or less severity endure on an average of three or four years. Further, a small percentage of these cases have become helplessly insane, and numerous cases more or less melancholics. Showing the stabilizing power of procreation it is well established that women with children are not so seriously or so long affected as those who have none.

THIRD. It has been estimated that

in 16% of double oophorectomy cases sexual desire is entirely lost after operation, and in another 16% of cases the sexual interest is greatly lessened and soon lost. Further, it is questionable whether all cases are not somewhat affected.

Although there are many more reasons for preserving the ovaries, and therefore the tubes, than the time of this paper will permit, the above are sufficient to emphasize the necessity of preserving them when possible.

Conservation of the tubes and ovaries in inflammatory diseases is at once the most difficult, most important and most disappointing chapter in conservative surgery of these organs. It is difficult because it is almost impossible often to preserve with good function these organs that are more or less destroyed by disease; important because this is the class of cases that occur in young women, in whom preservation is almost absolutely necessary; disappointing because more or less failure more often follows this class of operation than any other in the pelvis.

Operation should rarely be done on these organs till after all inflammatory symptoms have subsided, preferably from two to four months or longer afterward, because statistics show that about 66% of all pus tubes are sterile after this time. The operation should be performed only when the health or discomfort of the patient demands it.

Since this is an operation of dire necessity it behooves us to use every effort to cure the disease before it becomes suppurative which, so often sooner or later, requires surgical intervention to save what you can out of the wreck. We have now for some

time past looked hopefully toward autogenous vaccine to cure this disease for us without surgery, but so far, we have hoped in vain, because most recent investigations seem to show the futility of this particular vaccine therapy. Perhaps the difficulty lies in the fact that the infecting organism or organisms are difficult to determine, for it is not necessarily true that the organisms isolated from the cervical discharge are the same as those in the adnexa. At all events autogenous vaccine therapy is now a failure for this disease. Statistics seem to show that 40-60% of these cases are gonorrheal in origin; 20-30% staphylococci or streptococci; somewhere about 5% colon bacillus; 4% pneumonococci and 1-3% tubercular. As a matter of course the infecting organisms must vary greatly according to the place or class of patients from which the statistics are drawn. In private practice gonorrhoeal infections are probably less and the pyogenic cocci infections after abortion, miscarriage and labor, greater.

No conservatism can be practiced upon the tubes when containing pus, and invariably demand removal. Tubes thickened and infiltrated by long continued intramural infection are better removed, but much more latitude may be allowed if the infection comes from the abdominal cavity instead of the uterus, as from an appendicitis or other peritoneal inflammation, even when the source of the inflammation is the opposite ovary, for example following a ruptured or twisted pedicle ovarian cyst. We have personally seen many such cases where the opposite tube would be an angry dark red color; thickened to the size

of a finger, and literally had to be dug from its bed of adhesions, recover excellent function and give no trouble to the patient after a few weeks time. We recall one such case, never before pregnant, followed by pregnancy eighteen months later, which went on to term with the delivery of a fine healthy boy.

Nature always puts an important organ as far from harm's way as possible. So with the ovary. Its liability to infection is less and its resistance greater than the tube. Even when the tube is full of pus, and both tube and ovary buried in adhesions, the ovary will be found more or less intact and a portion at least can be saved, and the raw surface after careful hemostasis, with fine cat gut, neatly sutured beneath the broad ligament. In young women both ovaries or pieces of both ovaries should be saved if possible, even where both tubes must be sacrificed, because the health and happiness of the patient will be in proportion to the amount of good ovarian tissue saved for her.

If not even a piece of ovary can be left attached with blood supply, there is nearly always a piece of one ovary that is good and this should be at once removed and transplanted as near as possible to the normal location of the ovary or wherever about the uterus the blood supply is good, because it has repeatedly been shown that a piece so transplanted will live and prevent the nervous phenomena following double oophorectomy.

There is one particular class of these inflammatory cases to which I wish to call especial attention, and that is those cases which have had trouble-

some dysmenorrhoea and when the abdomen is opened it is found that both tubes must be removed, although one or both ovaries can be saved. In our experience it has been wise to remove the uterus also, because painful menstruation continues and both ovaries swell up and become almost as painful as before operation. On the other hand all cases in which the uterus was removed the patient has gotten well, and stayed well with little or no trouble.

It does not seem to us wise to remove the uterus in every case in which it is necessary to remove both tubes, because if the patient has had no dysmenorrhoea before, she will have none after operation, and the majority of women feel they are more nearly normal when they menstruate.

In ectopic pregnancy the tube and ovary of the affected side must generally be sacrificed, and makes little difference because, as a rule, the other side is good. However, in early cases the tube need not, and should not be sacrificed. Very rarely the gestation portion of the tube may be resected and the rest of the tube saved by an end to end anastomosis. Such a case was the following:—

Case I. Mrs. R., age 24, married five years. No pregnancies. Was seen in March, 1907, with typical symptoms of ectopic pregnancy. History of having passed last period only three weeks and had been flowing irregularly and scantily for a week, severe pain in left side of pelvis. Examination showed a tumor on the left of the uterus the size of a small orange. There was also a small tumor on the right side. A diagnosis of ectopic ges-

tation was made and the abdomen opened as soon as the patient could be prepared. Operation proved mass on the left to be an ovarian cyst with twisted pedicle which would account for pain. Mass on right side was an ectopic gestation sack about the middle of the tube, and had never ruptured. It was not larger than an English walnut. The ovary and the rest of the tube were good. This was peculiarly fortunate because the cyst had destroyed the other ovary. The tube containing the sack was resected and end to end anastomosis of the tube made. Recovery was easy and patient has remained well.

There is one exceedingly satisfactory chapter in conservation of the adnexa, and that is in hysterectomy cases for uterine myomata. In this operation it is the rule to find one or both ovaries and tubes normal, or sufficiently good to leave safely. Both tubes and ovaries should be left if normal, especially in young women. It is better to leave them even if the patient has passed the menopause, because some of the worst cases of nervousness have occurred between 45 and 50 years of age. In young women it is imperative to leave at least a piece of ovary if no more can be saved, and it has been our best plan to do the same by patients past the menopause unless we suspected malignancy.

RESULTS

We shall consider the ultimate results of conservative surgery of the uterine adnexa as we have discussed them in this paper.

In inflammatory cases, as we have already stated results in this class of

work are often discouraging, but on the whole they are better than by the old method of removing everything in sight. It is true that the operative recovery is much more brilliant in radical than conservative surgery, but the end results are not nearly so good. A few of those miserable nervous wretches on your hands as the result of double oophorectomy will convince anyone that it is better to have the conservative failures complaining of some of the old pains and aches. These latter at the worst can be re-operated and cured. For the former nothing can be done satisfactorily, since ovarian extract administered is far from satisfactory and regarded by most surgeons as useless. It looked for awhile that ovarian transplantation would be the thing required. The action of the ovary is chemical through the corporalutes and not through the nerves, and therefore suited to transplantation, but unfortunately while it is easy to transplant a patient's own ovaries, or sections thereof, to any place where there is a good blood supply, it is difficult to transplant to her those of another woman. Even where this hetero-transplantation is a success, the hormones of the donor's ovary are not suited to the recipient and may cause as much trouble as good. Experiment has shown that hetero-transplantation is most successful where the donor and recipient are of close consanguinity.

Of inflammatory origin there have come under our care 116 cases that required surgical treatment. Eighty-two of these operations were conservative; a tube and ovary, an ovary or a part of an ovary were left in each case. Of the 36 remaining cases dou-

ble salpingo-oophorectomy was done and in several cases the uterus was also removed. Of these 36 nearly all occurred in our earlier experience and were of the worst type of bilateral pus tubes, many of them tubo-ovarian abscesses which require removal at any time. Of the 82 conservatively treated cases only two required reoperation. Of the last fifty cases treated by us only one has been left without any ovarian tissue and that one had been operated before, by another surgeon, the right ovary and tube having been removed. The remaining ovary, and the tube formed a tubo-ovarian abscess and left us no choice but removal.

In the entire series of 116 cases four deaths occurred; two in each class. Neither death in the conservation class could be attributed to the conservative treatment, we think, while the apparent greater mortality of the 36 cases treated radically was due to the severity of the disease and bad condition of the patients. Where the ovaries have been destroyed as in this class of patients there is little disturbance after double oophorectomy.

Cystic degeneration of the ovary, or part of the ovary left, is prone to occur unless care is taken to insure a good blood supply. Personally we insure this blood supply by never severing the piece of ovary from its peritoneal attachment to the blood ligament. This is done by cutting free the piece of ovary to be left except for the peritoneal investment nearest the blood ligament. The part to be removed is then cut away leaving the piece, desired to be left, attached to the broad ligament by a peritoneal band. The peritoneum beneath the blood lig-

ament is now divided and dissected loose for enough space to receive the conserved piece of ovary. Into this pocket the piece of ovary is placed, cut surface to the raw surface of the broad ligament, and sutured in place with fine cat gut.

In 32 hysterectomies for uterine fibromata there have been only two cases in which both ovaries were removed. Both these cases were past 45 and in one malignancy of the ovaries was suspected, and the other was bilateral cystic degeneration destroying both ovaries. All of these cases have recovered and so far as I have been able to trace have remained well.

The mortality in conservative surgery of these organs is not greater than in radical treatment, in fact, statistics show that mortality to be slightly less.

Pregnancies following conservative treatment of inflammatory cases are few, because the organs are more or less destroyed or permanently injured at time of operation. However, several freak cases are reported in literature such as that reported by Clark and Morris, in which bilateral pus tubes of unusual size had been removed and tied off at the uterine cornu, yet pregnancy followed two years later and the woman gave birth to a healthy child at term.

Pregnancy frequently follows removal of one pus tube when the other is more or less normal. Occasionally we are gratified to see pregnancy follow only extensive suppurative diseases of the appendages, as the following shows:—

Case II. Mrs. H., age 27, married 5 years, had a severe infection fol-

lowing miscarriage three months previously. The patient when seen was profoundly septic, emaciated, and so weak as to be questionable whether she would survive the operation. Operation disclosed a tubo-ovarian abscess of the right side containing a pint or more of foul smelling pus and was found after separating innumerable adhesions of intestines and omentum and removed. The left tube and ovary were dug out of numerous adhesions on this left side, and although thickened, angry and misshapen contained no abscess and was plastically treated and left. Drainage was used and continued for two weeks. The patient

recovered very slowly, but in six or eight weeks was about again.

Two and one half years later I was pleased to receive a letter from the husband saying his wife had given birth to a healthy child. Child and mother have both done well since.

From the foregoing we beg to submit the conclusion that although the results of conservative surgery of the uterine adnexa are far from perfect and often disappointing, still they are much better for the patient and sufficiently encouraging to us to continue the work, feeling sure that our results will improve as our gain in experience enables us to better select our cases.

BOOK REVIEW.

A MANUEL OF CLINICAL DIAGNOSIS BY MEANS OF LABORATORY METHODS.

By Charles E. Simon, M. D., Professor of Clinical Medicine in the College of Physicians and Surgeons, Baltimore, Lea & Febiger, Publishers, Philadelphia. Octavo 780 pages, with 168 engravings and 25 plates, cloth \$5.00.

This manuel has been very popular since its first edition and the improvements and additions in this, the seventh edition will make it popular again. The book is now divided into two parts, Part I, represents the technical portion, and Part II, an entirely new addition to the clinical portion. In order to make room for this second part it was necessary to eliminate

much and rewrite the rest in an up to date concise manner.

This book is not only a hand book for the beginner, but also a guide for the laboratory.

The alphabetical arrangement of the diseases saves time and the complete system of indexing places the contents at easy reach.

Of special interest are the illustrations which as color plates, like in the description of the Wassermann reaction, give a clear understanding of the text. The serum diagnosis of syphilis has been entered into more practically than any manual of this nature. We recommend this book, not only as a text book, but also as a work of reference.

FEST

DORLAND'S AMERICAN ILLUSTRATED MEDICAL DICTIONARY

The New (6th) Edition Revised

Dorland's American Illustrated Medical Dictionary. A new and complete dictionary of terms used in Medicine, Surgery, Pharmacy, Chemistry, Veterinary Medicine, Nursing, Biology, and kindred branches; with new and elaborate tables. Sixth Revised Edition. Edited by W. A. Newman Dorland, M. D. Large octavo of 986 pages, with 323 illustrations, 119 in colors. Containing over 7000 more terms than the previous edition. Philadelphia and London: W. B. Saunders Company, 1911. Flexible Leather, \$4.50 net; thumb indexed, \$5.00 net.

The entire work has been reset from A to Z, so that the book is really a *new work*. The ten features follow. Those distinguished by an asterisk (*) are new with this edition.

New Words. "Dorland" defines hundreds of *live, active words* not defined in any other Medical dictionary, bar none. To this edition alone *over 7000 new words* have been added.

**Capitalization.* It furnishes a correct guide to capitalization, initial capital letters being used for proper names only.

Pronunciation. It gives the pronunciation of *every word*. Many dictionaries give only the accent.

Etymology. It makes a feature of the derivation or etymology of the words. In some dictionaries the etymology occupies only a secondary place, in many cases no derivation being given at all.

**Veterinary and Dental Terms.* It

makes a specialty of the terms used in these sciences, in every case full definitions being given. "Dorland" defines more of these terms than any other medical dictionary.

Ease of Consultation. In a dictionary this is a highly important consideration. In "Dorland" it is assured by reason of three features; 1, Every word has a separate paragraph, making it easy to find the word quickly; 2, *Phrases* are *always* defined under the *nouns*; 3, The extremely flexible binding.

**Medical Biographies.* It gives the full name, nationality, specialty, and dates of birth and death of men whose names have been given to diseases, structures, procedures, etc. Also short biographic sketches of the "fathers" of medicine.

Anatomic and Other Tables. It contains extensive tables of arteries, muscles, nerves, veins, etc.—of the greatest help in assembling anatomic facts. In them are classified for quick study all the necessary information about the various structures.

**Dosage and Therapeutic Table.* It contains a comprehensive dosage and therapeutic table extending over some fifty pages, arranged alphabetically and especially designed for quick reference.

Every Word Defined. In "Dorland" every word is given its definition—a definition that *defines* in the fewest possible words. In some dictionaries hundreds of words are not defined at all, referring the reader to some other source for the information he needs *at once*.

We heartily recommend this dictionary to all who are in need of such a work.

McB.

The New Mexico Medical Journal

Volume VII

FEBRUARY, 1912

No. 5

E · D · I · T · O · R · I · A · L

THE OWEN BILL

What is the "Owen Bill"?

The Owen Bill provides for the establishment of a Department of Health, with a Director of Health, who shall be the head thereof, and into this Department of Health there is transferred the Public Health and Marine Hospital Service from the Department of the Treasury, that part of the Bureau of Chemistry which deals with the adulteration of foods, drugs and liquors, from the Department of Agriculture, and the Division of Vital Statistics, Bureau of the Census, from the Department of Commerce and Labor.

From an address delivered before the New Orleans Forum by Dr. Isadore Dyer, of the Medical Department of Tulane University, Louisiana, we quote as follows:

"The attention of the general public has been elicited with regard to the "OWEN BILL" and, curiously enough, largely through the efforts of its opponents, whose various endeavors have been fully exploited in the daily press.

If as much notice had been taken of the OWEN BILL itself and if its real purpose had been as widely discussed, there might be a greater demand on the part of the public in favor of its prompt passage.

The proposed Act by Congress has been before the National Body since March 24, 1910, and as yet no definite steps have been taken to put it into effect.

Most persons discussing the OWEN BILL entertain it as a proposition in the interest of the public health fathered by the regular profession as anionizing the irregular practitioners of medicine, and most people have left the matter there, to work out its own salvation.

As a matter of fact there is nothing in the OWEN BILL which in any way whatever refers to any school, or sect, or cult of medicine except to state that no notice shall be taken of these. There is nothing in the BILL which contemplates any consideration whatsoever of the quarrels of the parasites of a worthy calling in their protest against an imagined advantage taken of them.

The OWEN BILL stands for the interest, for the protection in health and against disease of every man, woman and child in the United States and our outlying colonies, under the direction of an organized department, with a dignified head, occupying an authoritative position either as a member of the Cabinet or with a distinct office independent of red tape. There are no

politics in the proposed creation of such a department and neither altruism nor sentiment are essentially interested in the basic principle which dictates the right of the people to be served in the preservation of their health and the health of their children. **The question** is one of sociologic and economic importance and deals directly with the individual as a unit of intrinsic value in the estimated potentiality in the scale of human life as related to his earning capacity and his citizenship.

The OWEN BILL contemplates an organized campaign against preventable disease, directing its operations towards the impurities in food, hygiene and in the diseases already grafted upon our people and the prevention of those to come. It contemplates lifting the burden of the care of the public health from the occasional philanthropy which may do good, but only spasmodically and certainly in a limited way.

MEDICAL LEGISLATION

The "medical bill" that is published in this number of the Journal is the one that the First State Legislature will be asked to enact into a law. This bill, if enacted, will, at once, place New Mexico in the front rank and in a favorable light with any state in the union. Every well informed physician knows that heretofore our medical law has been very lax, and as has been said, is "nothing more than a registration law," and has served only to legalize incompetence in the practice of the "healing art". The "legislative committee" of the New Mexico Medical society has been at work on this

bill, through some of the best lawyers in the state, ever since last November, and here present, what they think, a bill as near perfect as such matters can reasonably be expected to be. The regular profession does not desire nor seek any advantage whatever over any other school of practice in the preparation and form of this bill, and the bill, as it reads, does not provide any such advantage; it does not even give them a majority of members of the Medical Board. It was the aim and intent of the committee to present a bill that would be equitable to all systems of practice alike, without showing favoritism to any. A careful reading and study of the bill will disclose that this idea has been carried out faithfully. If the members of the Board had been proportioned in exact proportion to the practitioners of the state of all systems represented on the board, the regular system would have claimed at least six members of the board instead of three. Again; nothing is required of one school that is not required of all others, only the peculiar features of each school of practice are provided for in examinations, certificates etc. This is fair to all systems alike and is all we want. It is hard to conceive how any member of any of the different systems of practice can find any fault with the provisions of this bill, unless special favors are sought at the hands of the legislature.

To be sure, there are differences of opinion as to certain provisions of the bill, but hardly can there be any on the feature of examinations, requirements and the essential features that go to make up an efficient, equitable

medical law. Some may object to the clause that provides that each of the different organizations of the state may nominate to the governor a list from which he may appoint the members of the board; but look at this clause, sixth, in section one, and it will be seen that it is not made mandatory, either on the organization or the governor, but it plainly says these lists *may* be made and that the governor *may* select from them, not that he *shall* or *must* do so. It would appear that this arrangement would be *very* agreeable to the governor, as it would, in a measure, be a help to him in selecting men for this board who are best qualified for the duties thereof. This board should be divorced from politics, and only qualifications should decide the appointment. Then, who is best qualified to judge of the qualifications of a member of this board, the members of the different systems of practice to be represented on it, or the governor? The governor may know more about the politics of the physicians of the state, but hardly can he be the best judge of their qualifications for the duties of this board.

All in all, a careful reading and weighing, pro and con, will hardly array any one, who is disposed to come up to the matter in a spirit of fair play, against this act.

So, let all, of every system of practice represented in this bill, who regard the welfare and health of the state as an important matter, bring every legitimate influence to bear upon the law making powers to get this bill enacted just as it reads and without a single alteration.

C. M. Y.

EPIDEMIC CEREBROSPINAL MENINGITIS

The recently reported epidemic outbreaks of cerebrospinal meningitis in various parts of Texas, together with the fact that Dr. S. A. Milliken, Health Officer of Grant County, New Mexico, has reported a case along the line of the Southern Pacific Railroad in Grant County, is sufficient warrant for this Journal to call the attention of the practitioners of this part of the country to the necessity of being prepared to recognize the disease and to post themselves relative to treatment.

PUBLIC HEALTH REPORTS of January 26th, 1912, contains a most excellent article by Passed Assistant Surgeon Frost, Public Health and Marine Hospital Service, reviewing the disease with reference to public measures for its control. The perusal for this review is well worth the time of any physician. It is impossible for us to devote the space in this issue to the details necessary to any discussion that would be of value, and we must refer the reader to the standard authorities on the subject. Surgeon Frost, however, suggests the administration of urotropin in moderate doses as a possible, though unproven, prophylactic.

IF IN KANSAS WHY NOT IN NEW MEXICO?

Below we give a letter sent out by the secretary of the Kansas State Board of Health, omitting names, and call attention to its contents without

other comment than that in the heading above.

STATE OF KANSAS

Department of the

STATE BOARD OF HEALTH

S. J. Crumbine, M. D. Secretary

Feb. 8, 1912.

Dear Doctor:—

We are enclosing you herewith circular of Instructions, relative to the new plan inaugurated by the State Board of Health for the distribution of Diphtheria Antitoxin to the residents of the State. You will notice that the plan for distributing Antitoxin to the indigent is the same as in the past. We have had a great many complaints on the prohibitive price of Diphtheria Antitoxin, and realizing that a great many people do not care to become pauperized by accepting the charity of the State, and who could pay a nominal fee for Antitoxin, we have arranged with of to supply Antitoxin to all legal residents of the State, and the great saving thus effected on the several doses selected by this Board, as shown by the following figures, will certainly place Antitoxin within the reach of all:—

1000 Units (Immunizing Dose) complete with syringe \$.70 (Regular retail price, \$2.00.)

3000 Units (Curative Dose) complete with syringe, \$1.60. (Regular retail price \$5.00.)

5000 Units (Curative Dose) complete with syringe, \$2.50. (Regular retail price, \$7.50.)

This Antitoxin is the same as that furnished by the State and can be procured, as you will notice, through the regular distributors. We hope by fur-

nishing this valuable product at this low price to reduce the mortality, and hope you will co-operate with us in seeing that every case of Diphtheria is treated according to our advice in the Circular. For your convenience, a list of the distributors is printed on the back of this letter.

Very truly yours,

S. J. CRUMBINE, M. D.

Secretary State Board of Health.

THE DOCTOR'S WIFE

Who, when there comes a "hurry call"
Comes tripping briskly through the hall,
With overcoat and case and all
The Doctor's Wife.

Who meets the callers day by day,
And when the Doctor is away;
Tells them he'll come without delay,
The Doctor's Wife.

Who keeps the Doctor on his feet
And wraps him warm against snow
and sleet,
And always has some cheer to greet,
The Doctor's Wife.

Who with a rare and ready tact,
Detects full many a useful fact,
And tells the Doctor how to act,
The Doctor's Wife.

Who, when Doc himself gets ill,
And will not take a single pill,
Just cures him up and makes no bill,
The Doctor's Wife.

In short who heals the Doctor's woes
And through each trial bravely goes,
Indeed how much the Doctor owes
The Doctor's Wife.

Dr. F. Palmer,

Cerillox, N. M.

EMPYEMA

This is a suppurating inflammation of the pleura, usually confined to one side of the chest. It may be primary or secondary, and when primary, is usually an acute affection,—when secondary, it is sub-acute or chronic from the beginning.

ETIOLOGY

The cause of suppurative pleurisy is not always easy to determine. It occurs more often between ages 5 to 9. Sometimes it is traumatic. When it occurs idiopathically it is usually associated with some depraved condition of the system as a result of vicious habits such as chronic alcoholism, or it may occur in the course or as a sequelae to some exhausting disease or debilitated condition. It often complicates the infectious diseases or pneumonia, especially in those of a feeble constitution. It frequent develops from sero-fibrinous pleurisy apt to be suppurative, and in our experience is the most common form we have to deal with in this western country on account of the number of tubercular cases coming here.

MORBID ANATOMY

The pathological changes in this form of pleurisy are more extensive and more plainly marked on the costal, diaphragmatic and mediastinal layers of the pleura. In primary, suppurative pleurisy there is poured out a large amount of plastic material which is transformed into pus, so much indeed, that frequently a large amount of pus is formed in the pleural cavity. In the secondary variety of suppurative pleurisy a sero-purulent effusion slowly accumulates in the pleural cavity, varying in character in different cases,—being thin and composed principally of serum in some cases and in others extremely thick with but little serum. This fluid usually occupies the most dependent portion of the cavity, though it may be confined to other localities by old adhesions, which frequently confine it to either the anterior or posterior half of the cavity. In acute suppurative pleurisy with sero-fibrinous exudation, pus cells form in the connective tissue, also on the surface of the pleura and are washed into its cavity along with the fibrinous exudate by the serous effusion. Sometimes the accumulation is large and takes place rapidly. This

is characteristic with the pleurisies occurring in connection with empyema.

A sero-fibrinous exudation may become purulent when a fresh cause of inflammatory irritation to active cell exudation is added,—the clear serum becomes turbid, shreds of false membrane are loosened from their connection with the underlying tissue, undergoing liquefaction and the whole or a portion of the pleural cavity becomes a suppurative surface.

Purulent accumulations in the pleural cavity may become so large that death may occur in consequence of pressure which interferes with the heart's action and respiration. The tendency of suppurative pleurisy is never toward recovery without evacuation of the pus, which may take place spontaneously in any one of several directions. I have one case in mind that opened in two directions. This patient was sent west thinking he had tuberculosis of the lungs. Upon examination, I discovered a large fluctuating mass just above the crest of the ilium and upon free incision a large amount of pus was discharged, and upon attempting to irrigate the cavity, the irrigating fluid would be expectorated, showing that the empyema had spontaneously opened in two directions—one downward and the other into the lung which had partly drained the cavity.

From his history I learned that three years previous to coming west he had had an attack of pneumonia from which he had never fully recovered, having had copious expectoration for two years before I saw him. Another case which comes to mind opened spontaneously in the seventh intercostal space. In some cases of circum-

scribed empyema the fluid portion of the pus is absorbed and the solid constituents undergo cheesy transformation, the salts of lime are deposited and the thickened pleura becomes calcified.

SYMPTOMS

The symptoms of empyema will vary with its character. Those cases in which the inflammatory process is acute accompanied by a rapid production of fibrin and pus are ushered in by a chill followed by a raise of temperature, full, rapid pulse and severe pain in the affected side. In some cases the active symptoms subside after a week or ten days, and symptoms of a more chronic form of empyema are developed. The symptoms of chronic empyema are often obscure and the presence of pus in the pleural cavity is often overlooked, and indeed cannot be determined by the rational symptoms or physical signs. The leucocytes are usually increased. The patient rarely suffers from pain, there being only a sense of uneasiness in the affected side. There is a gradual loss of flesh and strength, a pale anxious expression with irregular chills and profuse sweats. We may have oedema of chest and the intercostal spaces may be obliterated or bulge. Ordinarily there is some cough with very scanty expectoration. Dyspnoea is almost always present owing to the pressure of the fluid in the pleural cavity. The patient gradually assumes the appearance of one in the last stages of tuberculosis. If empyema occurs as a complication of septicemia or pyemia its commencement is at times, very insidious. Not infrequently pyemic patients make no complaint which would direct attention to the pleura,

even when the pleural cavity may be full of pus. If the opening takes place through the bronchial tube, the discharge of pus is ordinarily preceded by symptoms of pneumonia. I have known cases of spontaneous opening into the lung that last many months before the cavity would contract and a cure of the case result.

The physical signs of empyema are the same as those of pleurisy with effusion, with the exception that the level of the fluid is not so rapidly changed by change of posture, owing to the consistency of the pus. The differential diagnosis can only be determined by aspiration. The prognosis is generally unfavorable though some cases recover after operative interference and even after the evacuation of large quantities of pus. The immediate cause and amount of constitutional resistance of the patient has

considerable to do in the matter of prognosis. The prognosis is more favorable in young robust subjects, and in those cases of traumatic origin, tubercular cases being the most unfavorable. These latter nearly always terminate fatally.

The treatment of this affection is essentially mechanical, either by aspiration or rib resection and drainage. I shall not go into the technique of these operations because they are well described in all modern text-books on surgery of the chest. However, I will say that I am in favor of aspiration in very emaciated patients in order to give them a few days in which to build up ready for the more thorough operation of rib resection, and it gives a temporary relief for this period.

I have only made a skeleton of this most important subject and trust it may be brought out in its finer points in the free discussion which I solicit.

Epidemic Meningitis

Report of Four Cases, by B. F. Stevens, El Paso, Texas.

In two of the following cases, Flexner's serum was first given on the third day of the disease, both patients recovering. The other two, male adults, father and son, cases I and II, were not seen until the seventh day of illness. The son, age 18, was given one injection of serum, but died next day, a few hours after the father's death. Case four, a male adult, assisted at the injection of case II ten days previously. These two were the only known cases in that locality. Case III developed a few days after death of cases I and II, some twenty-five miles distant. Only one case developed from all the number who were exposed to infection. No quarantine measures other than those used in typhoid were adopted.

CASE REPORTS.

Cases I and II, father and son, farmers; were seen by Dr. F. P. Miller after they had been sick seven or eight days and were practically moribund. In only one of them did he do a Lumbar puncture and use the serum; both patients died the following day within a few hours of each other. Stained smears showed the diplococcus intracellularis meningitidis.

Case III, a female infant, age two years, started in with temp. of 106 per rectum. In two days, the neck became stiff, petechiae appeared and Kernig's sign was noted, and there was extreme oposthotonos. Lumbar puncture was made, 60 cc of fluid drawn off and 15 cc of Flexner's serum given. Twelve hours later 15 cc more was given. The second day 30 cc was given at one dose; third day 15 cc; fourth day 15cc; fifth day 15cc; after which time the temp. did not go over 99. The other symptoms also were all practically relieved. The serum was stopped, though the organism was still present in the fluid, because the child was apparently well and the parents did not want the child hurt. The temp. remained down for five days, shooting up to 103.5 on the eleventh day of the disease, with the original symptoms recurring. Serum was again given, 15 cc in the morning, 30 more the same night. Injections were continued daily until the twenty-second day of the disease, when the temp. remained below 100 and the general symptoms were much abated. On the twenty-ninth day, the temp. again went up to 103 when 15 cc of serum was given; next day 15 more and on the thirty-first day 30 more; on the

thirty-third day 30 more. No more serum was given, because it seemed to have no apparent effect on the temp., nor were fewer cocci present in the spinal fluid.

The temp. continued to run from 99 to 102 for two weeks longer, though the patient continued to improve in other respects. During the first week of illness, the temp. dropped after each dose of serum and the child was apparently well at the end of five days. She remained quite well for a week, the fever going up the third week but came down under the use of serum, only to again go up after six days. The temp. did not go so high with the third return nor was the child as sick, but the serum seemed to exert no special effect, in fact, the temp. seemed to go higher after each injection. The child went on to recovery. No other drugs were used except laxatives, bromides and small doses of hexamethylenamin. A troublesome urticaria appeared during the first week, but lasted only four days. At one seance 105 cc of spinal fluid was obtained and 30 cc of serum given very slowly. The patient suddenly ceased breathing. The nurse held her up by the heels while I performed artificial respiration. Natural breathing started in four minutes, though to me, it seemed like an hour. During the first week, the withdrawal of spinal fluid seemed to cause no pain, while during the injection of the serum, the child would struggle violently and cry, even when given slowly. The reverse obtained when the process was repeated during the recurrence. I cannot offer any explanation for this phenomenon.

Case IV. (Dr. F. P. Miller's patient, through whose courtesy I am

indebted for the following report.)—Male; age 38—Helped inject case II—became ill two weeks after first exposed. Was seen the third day of illness, was unconscious, petchiae were present, Kernig's sign was noted, some oposthotonos and rigidity of entire spine.

He received 30 cc of serum on four successive days. Became conscious after first injection, so it was necessary to give a general anaesthetic for the following injections, he was a big muscular fellow and hard to control. The temp., 106 at the beginning of illness, dropped decidedly after each injection and at the end of fifth day was normal.

Stained smears showed the presence of the diplococcus. At the end of the fifth day they had entirely disappeared from the spinal fluid. This patient had a right sided facial palsy, also complete deafness in right ear following. The facial paralysis cleared up by the tenth day and three months later, the deafness was considerably improved.

REMARKS.

The use of Flexner's serum is now on a firm scientific foundation. As in other serum-treated diseases, its early use is urged. Dun (I) quoting from Dopler, Flexner and Netter gives the mortality average of only 9.82 per cent when serum is used before the third day of disease, 15.83 per cent when given from the third to the seventh, and 28 per cent when given after the seventh day, so the urgency for early use is at once apparent. Regarding the technic of procedure, it is not difficult, nor dangerous, if one is careful to use positive aseptic methods. To cleanse the side of puncture, I used

soap and water with gauze, following with 70 per cent alcohol. Its use on repeated days does not cause a dermatitis, as would iodine, bichloride, etc. After once doing a Lumbar puncture, the sensation of resistance one meets with in getting through the interosseous ligaments, then through the dura, makes it easy to know when the needle is in the canal, even before the appearance of fluid. Elaborate instructions accompany the serum as put on the market. Either the second, third or fourth Lumbar inter-space may be used.

DIAGNOSIS.

After the third day, it is easy, or before that time if seen, during an epidemic. The petechiae, oposthotonos, Kernig's sign, high temp., rigid spine and finally the use of the Lumbar puncture, which gives a slightly clouded fluid, quite abundant, showing an organism very much like our old friend the biscuit shaped gonococcus.

White (III) says that in fulminating cases the cocci are hard to find, so even if fluid is not turbid nor are cocci found, we should resort to the serum and await cultural tests where the symptoms are suspicious. The serum can do no harm.

COURSE OF DISEASE.

Before the use of serum, Holt (III) says, of 350 cases recovering without serum, the disease lasted one week or less in 3 per cent, and five weeks or longer in 50 per cent. Flexner and Jobling in 288 cases found that symptoms persisted on an average of eleven days after the first injection of serum; they also say that 25 per cent of the patients got well by crisis. Complica-

tions, once the bane of those recovering, are no longer feared. The serum should be used daily until the cocci disappear from the spinal fluid, even if general symptoms have improved and the patient apparently well. Where serum is not to be had at once, Brem (IV) advises use of hexamethylamin. In the case he reports, his analysis of the spinal fluid showed it in solution at different times of from 1 to 50,000 to 1 to 200,000; his patient died, however.

Mayer et al (V.) report their results in the examination of a garrison of 9111 healthy men where an epidemic had existed, 2% of them harbored germs - at a second examination of 1911 of the same men, 2.46% of them still showed the same microbe. Their study of epidemics makes them think the disease dies out spontaneously; that isolation and hygienic measures alone are of value. It seems hopeless to control along the lines of typhoid entirely.

Hutinel (VI) reports four cases of death following the use of serum, 3-5-44 days after the first injection. 25 to 30 cc were injected at a time. He discusses theories in regard to anaphylaxis. He suggests using an injection first, of plain serum of some animal other than is used in preparation of the anti-meningetic serum, about five hours before.

Brown (VII) reports 38 cases in which serum was used. One patient died of myelitis after seventh injection, one of streptococcus infection of spinal canal. Two had relapses and died, probably because they were not promptly treated the second time.

How to Choose a Doctor

Read at the Thirtieth Annual Meeting of the New Mexico Medical Society
at Las Vegas, September 8th, 1911.

Dr. S. D. Swope, Deming, New Mexico.

The importance of the choice of a doctor is secondary only to the choosing of a wife. In the latter we are choosing a help to make a home and the importance of that choice is secondary to none since she is to be our ever present help in time of prosperity as well as in times of need; the sun that warms our existence into the budding spring-time of marital felicity; the queen of the one kingdom where a Utopian reign makes all its subjects willing slaves to the wisdom and virtue that sits enthroned; *the guiding star toward which our footsteps are turned when the honey moon in all its youthful beauty has sunk behind the flower bespangled waving fields of fruitful grain along life's varying pathway.*

In the former we are choosing a guardian for the protection of our little principality from all the winds of adversity that may sweep across the fields of budding beauty which constitutes that footstool of our earthly happiness; an ever helping hand in time of trouble; a bulk head of the cardinal virtues—faith, hope and charity—upon whose shoulders we may hang our burdens of ill health, marital differences and childish fears with no

thought but that they will be borne away in sacred silence and lost in the maelstrom of multitudinous cares which surround our medical adviser.

Dr. Edwin B. Shaw, recently read a most excellent paper before the Colorado State Medical Society in which he gave a most complete line of suggestion on "The Making of a Doctor." If all our medical men could be constructed under the rules, and in the form which the doctor so ably sets forth, I could have nothing to say to you on this subject and the choosing of a doctor would be as simple as the flipping of a coin.

Physical strength, mental development, honesty and virtue in their highest degrees of perfection, are the basic principals, constituting the foundation for our "noblest of callings but poorest of trades." No one within the sound of my voice would think of leaving out any one of these attributes when they are about to select a family physician, yet all have not reached this high altitude of perfection who write their name M. D., and set forth as a guide-post to suffering humanity a flaming sign by which the public is informed that they are prepared to serve

those in need of medical service in the capacity of physician and surgeon. Under many of these flaunting signboards should be written, "Physician, heal thyself. Protect and husband the physical strength which the all-wise ruler of the universe has so bountifully bestowed upon you. Amputate the long hours of riotous uselessness, whose intemperance destroys your physical strength and befuddles the brain, upon the healthy action of which depends the welfare and frequently the life of your patrons. "Grow in knowledge as the nights succeed the day. Feed your mentality with the wholesome knowledge of those who by their experience and opportunities have risen to exalted heights among your professional brethren. Partake bountifully of the strong food of experience and observation, and your inexcusable conceit will fly away upon the wings of the morning, only to return when the shades of life's evening are gathering about your useful life and you sit upon the threshold of eternity justly exultant over your achievements. Then the Master speaks the greatest of all plaudits, 'Well done thou good and faithful servant.' Cut away every dishonest branch in your tree of life with this motto constantly before you. This above all: "To thine own self be true and it follows as the night the day, thou canst not be false to any man." Purge from your body every evil thought that always leads to evil deeds, remembering that none but the pure in heart should alone be allowed to enter the sacredness of the sanctuary of the home; the holy of holies into which you are led with naught but conscience to restrict your acts. Let virtue set upon your

brow and fill your heart to the exclusion of every vice, and when the perfect jewel falls from its high estate to the filthy ooze of degradation, thereby losing its luster forever, go exchange your needle for a crow-bar, your scalpel for a spade, your medicine chest for a hod and follow an honorable occupation with your kindred kind who have unrestricted access to none but their own unfortunate family circle."

Across our great continent, a succession of trains of palace cars are flying to the East and the West; on their comfortable cushions you are almost freed from the danger and fatigue of transcontinental travel. When night spreads her somber wings over the universe, "You gather the draperies of your couch about you and lie down to pleasant dreams," secure in the knowledge that every safe guard has been placed about you to prevent bodily injury. You know, if you know anything about the management of the institution to which you have paid your money for transportation, that they have selected the employees that guard your welfare with intricate care. His body must be strong; his education must be ample; his honesty must be unquestionable; his character unbesmirched. Would you ride on this train if you knew that the engineer was drunk; that four rails stretched out in front of his blurred vision where two steel threads really existed, and he was seeing blue monkeys with red tails and green heads climbing over the semiphores? Indeed you would not! Would you ride on this train if you knew the engineer had been out with the boys the night before; that his eyes were swollen and

red; his stomach rebelling at the reprehensible treatment it had been subjected to; his nerves were sending uncorrelated trembling suggestions to the various members of the body; his head almost bursting with the congestion that would clear up the befuddled brain? Indeed you would not! Would you ride on this train if the engineer who pulled it was a nervous epileptic from the effects of past excesses; who might fall from his cab at any moment, leaving the great iron horse, with all its magnificent power without a guiding hand and brain? Indeed you would not! Would you ride on this train if you knew that the car inspector who crawled amidst the dirt and grease to examine the wheels under your palace, was a weak bodied, ignorant, dishonest, unprincipled apology for a man who would more than likely overlook cracked wheels, injured journals and broken brakes? Indeed you would not! Would you employ a cook in your kitchen who was without honor, virtue, knowledge or physical strength, to properly perform his duties; who would supply you with improper food through carelessness, indifference or maliciousness; who might even put poison upon your table? Indeed you would not! Would you employ a nurse girl to guard and direct your growing children whose life had been vicious; who possessed all of the vices and none of the virtues? Would you place her in charge of the most magnificent jewels of your collection and go away with the sense that you have done your duty to yourself and to your offspring? Indeed you would not! Would you put a butler in your house, give him the keys to the secret places, intrust him with

the secret of your household, expect him to be closely associated with your wife, intrust him with her protection during your absence when he would care for, guide, protect and furnish example to your growing children, if he were a weak bodied, illiterate, dishonest stranger whose virtues were questionable? Indeed you would not. Would you let a disreputable minister of the gospel who had dragged the cloth into the slough of social ostracism, pray for the spiritual welfare of your children; take your little daughter on his knee; come into the sick room of your wife to offer comfort and consolation, or sit with her for hours discussing the conditions of home and church? Indeed you would not! And yet the average person will inquire of the crosseyed, blondeened haired, pudgy boarding house woman, or a pin-headed ten dollar a week hotel clerk with no brains above his eyes, and take their advice as to what doctor they will intrust with the lives and happiness of those most dear.

The choosing of a doctor, as I have said, is only second in importance to the choosing of a wife. In the latter act, if Cupid has not made too much of a butt of us, and shot our hearts to rags at the outset, we generally use some discretion. We find out something of her character; we want to know if she uses drugs or liquors indiscriminately, and how much she disguises her personal appearance by artificial means; we inquire about her temperament; we observe her carriage; we note her surroundings, and even take a good look at her mother that we may have some idea of the kind of woman that will sit opposite us at the table when we are too old to change

our minds or relations. We feel the solemnity of the words of the minister when he says, "What God hath joined together let no man put asunder." Luckily we may change our doctor if he does not come up to our requirements. Unfortunately for the laymen, they are not educated up to the point where they can distinguish the tares from the wheat in the field of medicine and it is often too late when they have discovered their mistake. Because of this, and with no selfish desire for their own pecuniary professional or social advantages, the honorable men of the profession ask the people to pass such laws as will safeguard the moral, physical and pecuniary welfare of the public by allowing none but competent, conscientious, moral physicians to offer their services to a suffering public at a time when their selective ability is sadly handicapped by the unfortunate conditions with which they are surrounded.

How to select a doctor is no easy task for a layman. One of the best doctors I ever knew wore an old white hat, cowhide boots, home-spun butter nut jeans and rode an old gray mare with his pill-bags flapping on her fat sides. His big round red face was the rainbow of promise that shone resplendant in every highway and byway of his country-side. His benevolent smile was a star of hope that lighted up every darkened sickroom into which it came, and when the dark winged angel of death overtook him he had never heard of appendicitis, malaria, eosinophilia, salvarsan, Wasserman or Noguchi. I never heard anybody say anything against that good old country doctor. He filled his place in life and filled it full. This

is the reinforced concrete base upon which the magnificent structure of modern medical science is being erected.

One of the worst doctors I have ever known wore a long tailed black coat, shiny silk hat, patent leather shoes, silk stockings and immaculate linen. He makes his calls in a shiny car and employs a liveried chauffeur. This outer disguise is not the subject of reproach, except the fact that in this case, it is the cloak that covers a multitude of sins. Some of the time he is compelled to devote to his immaculate toilet should be employed in cultivating the shallow areas of his feeble mind, in studying the means of detection and cure of disease. The time he spends on the street corners, surrounded by an admiring crowd of hoodlums, telling the infirmities of Mrs. A. B. and C. and detailing the gossip of Mrs. X. Y. and Z. could be profitably spent in studying the first principles of medical science. His imagination, inflated by alcohol or drugs, his moral sense obliterated by excesses. I would sooner open my doors to his Satanic Majesty, with his rattling hoofs, protruding horns and barbed tail turned over his back. My wife and daughters would at least be frightened at the latter's appearance unless his horns were covered by a silk hat, his barbed tail with a Prince Albert coat and his hoofs incased in patent leathers. They are two of a kind, only his Satanic Majesty is a plain devil and his emissary on earth a man-devil disguised by the tailor.

You would not invite the devil into your house would you? Then for their sake don't call his emissary to cure your sick children, smooth the hair

from the fevered aching brow of your trusted wife, or even give him access to the sacred precincts of her chamber.

It takes a good man to make a good doctor. It takes a sensible man to make a wise doctor. It takes an honest man to make an honest doctor. It takes a virtuous man to make a trusted doctor.

How shall you choose a doctor? First, one who to himself is true: one who is a pessimist in the morning and an optimist at night; one who puts not an enemy in his stomach to steal away his brains; one who spends long hours at study and does not admit to knowing enough to make review and research unnecessary; one who sees good in everything and has an excuse for those unfortunates whose resistance is too feeble for the temptations with which we are surrounded; one who is ever willing to lend a helping hand to those who have fallen from the higher planes of physical or moral standards; one who neither talks about his patients on the street corners nor in the drawing rooms or sick chambers of their neighbors; one who condemns not his brother practitioner, nor holds him up for ridicule for some real or fancied mistakes; one who is above the littleness of damning with scant praise; one who remembers the admonition of the Saviour, "Let him who is perfect cast the first stone," and recognizing the frailty of humanity, throws none. One who dresses becoming his station; one who needs no flaming headlines or reading notices to let the public know of his virtues; one whose signpost and monument of success are the good and faithful deeds performed; one who devotes the proceeds of his labors to the care of his

home and those dependent upon him for support; one who places his professional integrity above all earthly bribes; one whom the children will call after on the street and whose mothers will waive to from the veranda; whose fathers will shake by the hand with a substantial pressure of gratitude; one whom the old ladies love and the old men honor. Then:—

"Avails it whether bare or shod,
His feet the path of duty trod?
If from the bowers of ease they sped
To soothe affliction's humble bed,
If grandeur's guilty bribe they
spurned

And home to virtue's cot returned,
These feet with angel's wings will
vie

And tread the palace of the sky."

Choose an intelligent, bright, learned, honest gentleman for a doctor. Between an ignorant honest man and a smart rascal, always choose the former. Be sure if there is a doctor in your community who has nothing to do with the balance of the doctors, that there is something the matter with him and you had better let him alone. Don't be afraid of a young doctor if his youth is the only objection. If he is the right kind of a man and needs an older head, he will ask for counsel and the patient will get full value for his money. Do not be afraid of choosing an old doctor, if age alone would influence the choice. If he takes a good journal, buys and reads the new books and associates with his professional brethren in the society work, he is not a back number. If he needs counsel on some of the newer diseases he will call in a young man and both patient and doctors will profit by the interchange of ideas develop-

ing from years of practical experience and modern scientific research.

If flaming full page advertisements of some new fad or fad are necessary to bolster up their weakness and lead the gullible unsuspecting sufferer to the place of money changers where he gets no change. You had better steer clear of such pitfalls, for pitfalls they are however carefully they may be covered by deception.

Don't employ the man whom all the hoodlums of the street call "Dock" who sits on a goods box and whittles eight hours of the day spitting tobacco juice at the store cat's eyes and retailing obscene jokes. He is not the man to sit by the bedside of your wife nor take your daughter's hand.

I come now to an unfortunate class of people who have chosen doctors to their everlasting regret,—doctor's wives. If there ever was an unfortunate care-worn, over-worked beast of burden I think she is it. The man she married was not even a grass-widower for he has pledged his vows to his first love,—his profession, and still must remain devoted and true to his esculapian goddess.

Through the long evenings she is compelled to sit neglected while her husband sits at the feet of his first love and drinks of the seductive cup of knowledge which she places to his anxious lips. While she is tucking their babies away in their trundle bed he is holding some other woman's hand or smoothing the sick pillow of some other woman's child. "By the wee bit in-gle" she sits and nods and dreams of the terrible things that might happen to him who is boring a hole in the darkness with his indomitable courage and working his way up the rocky mountainside to a hut where pain and sorrow and anguish are waiting for his soothing. When he does return, all tired and worn out with bodily fatigue and mental anguish, 'tis an angel indeed who brings his slippers and accepts his exhausted scanty greeting with a recollection of Ella Wheeler Wilcox's lines, "He who has loved most he best may love again."

Have I told you how to choose a doctor? I fear I have miserably failed; but one more admonition I will suggest. "Be not the first to lay the old aside nor yet the last by which the new is tried."

“Surgery from the Standpoint of the Patient”

Read before the Second Annual Meeting of the Railway Surgeons of the Southwest at El Paso, Texas, October 29th, 1911.

By W. W. Roblee, M. D., Riverside, California.

In endeavoring this afternoon to consider a surgical operation from the standpoint of the patient, I am sure that some conclusions of real value can be drawn. Some of us have been unfortunate enough to require the services of one or more of our colleagues for serious surgical work and it is very certain that the experience was of great value in teaching us the prime importance of many apparently small details which before that time had not appeared as very important to us. The difference between operating and being operated upon was a tremendous one and if such was the case with us, who knew measurably well what to expect, what must it be to the average patient to whom the whole experience is new and terrifying, I believe that there is too much thought given by the surgeon to the operation in its technical aspects and not enough to the patient and his viewpoint. He is too often but one of a series of cases that the ambitious surgeon is anxious to make a record on and we are

very prone in our zeal for skillful technique or development of a new type of operative procedure, to overlook other features that are of great value in determining the ultimate outcome.

So for a little while let us forget our controversies as to whether the appendix should be dug out in all abscess cases or left for subsequent consideration, whether the stump should or should not be buried, whether more typhoid perforations get well after a simple drainage or no operation, or whether a careful repair should be made in all cases, whether the knife, the paste, X-Ray or cautery is the best treatment in epithelioma and consider some other less showy but fully as important features in our patient's successful care. I think that every patient will agree to the assertion that his sole object in submitting to the surgeon's knife is that he may (1) as speedily as possible recover from his disabilities, (2) with the least possible danger to life, and (3) with a mini-

num amount of discomfort. For this service, he is willing to part with a certain goodly sum of money; if any one of these three elements is neglected by the surgeon, he is defrauding his patient of some portion of the fee which has been paid to him. I wonder how many of us have thus taken money under false pretense.

Let us study an ordinary case of abdominal section and apply this principle thereto. We will take for granted in this discussion that the surgeon is able and does make a careful, accurate diagnosis and that the operative work is done in accordance with up-to-date surgical technique, although in doing this it is pre-supposed that we are all studying our current surgical and medical literature carefully and that we visit our colleagues in the larger surgical centers sufficiently often to know what the master-men of the profession are doing. After serving for the past three years as a member of the California State Board of Medical Examiners and also considering my own shortcomings in this respect, I am afraid that many of us will have to plead guilty to neglect along the line of technical fitness for our work. In so far as we are not well informed, we are defrauding our patients. Four or five first-class surgical journals and three or four books a year, if properly read, will keep a man up-to-date. Their cost will not exceed fifty dollars. Our patients have a right to demand at least that much of us. In Southern California, an orange grower must return at least 20 per cent of the net proceeds from his trees back into his grove in the form of fertilizer. If we treated our heads

as liberally as we do our trees, a man with a \$5000 practice would spend at least \$1000 of it for fresh material. I believe that such a plan would pay, not only in lives saved, but in actual cash returns if it were generally adopted by the profession.

However, we will, as I said before, grant that the surgical diagnosis has been correctly made but at this point in the conduct of the case, I am convinced that much harm is done in that other morbid conditions which bear a close relation to the patient's welfare are overlooked. I remember seeing at various times an operation performed upon a woman for hernia, who had diabetes, curretting of another who had interstitial nephritis, another operated upon for hernia who had a tuberculous apex—in this case an unskilled anaesthetist was employed for administration of ether, instead of using cocaine infiltration as should have been done, with resultant pneumonia and rapid spread of the T. B. All of these cases were operated upon hurriedly without their secondary conditions being discovered and they died within a few days following the operation. The class of disabilities most frequently overlooked or passed over without being properly estimated in relation to the surgical procedure, are the so-called functional nervous disorders and especially neu-raesthesia. Very many of our patients have suffered for years from the surgical disabilities, there has been a constant strain upon their nervous systems and they come to us in a state of profound nervous exhaustion. This very often leads to errors in diagnosis on the part of the surgeon, for the reason that the patient, because of hy-

peresthesia is led to lay more stress upon symptoms which have a comparatively trivial surgical basis, than would be the case with a normal person, and their ultimate recovery is greatly hindered by their *neuraesthesia*. It has been pretty generally decided by the surgical profession that operations for the relief of functional nervous or psychical disorders should be entered upon only after very, very careful consideration and without promising much in the way of relief for the nervous symptoms. Again, where the operation is not undertaken for the relief of nervous symptoms but for some very definite gross pathological condition, the ultimate recovery of health and strength may be very slow and even life itself may be seriously threatened by an associated nervous condition. Some of these cases may require a rest cure before the operation, all of them require it afterward and a very guarded estimate as to the probable time of convalescence should be given. For this reason, I think that the present craze for getting our patients out of bed and sending them home in the shortest possible time in which the edges of the wound may be made to adhere is a great mistake. Most of our patients will be the better for having from two to four weeks rest in bed with the other adjuncts of a proper rest cure. The surgeon's responsibility does not cease when these patients leave the hospital and he should not attempt to direct their treatment after they return home by giving them verbal instructions when they leave the hospital or by corresponding with them subsequently. They should be referred back to their family physician or to

some competent internist. The greatest good can be accomplished for the greatest number of patients only when the surgeons learn to appreciate the effect of *neuraesthesia* upon the results of the operation or the effects of the operation upon an existing *neuraesthesia* and when the family physician or internist is educated in the details of post hospital treatment. This portion of my paper should appeal with especial force to a body of railroad surgeons because of the rather frequent development of the traumatic neuroses by those who have been injured in railroad accidents. These cases, unless properly cared for, give great annoyance to the claim department and are a source of great expense to the railroad companies.

Heart, lungs, kidneys, the blood, the arterial tension, the nervous system, all should be carefully examined and taken into consideration by the careful surgeon. Every patient should either be gone over by an internist or the surgeon must keep in line with the developments in medical diagnosis and treatment so that he can cover this large general field. I wish to enter a protest against the specializing in surgery by the recent graduate. It is especially true of surgery that those who practice it should spend from five to ten years in either general practice or hospital work before specializing in this branch, as in no other way can the broad general view of a patient's needs be secured.

We now come to the operation itself, which we are granting will be skillfully done. There is one adverse element that enters into practically every surgical procedure and that is best summed up in the word *fright*. This

varies from moderate concern to abject terror and it is not given sufficient weight by any of us. Even the physician who has undergone an operation cannot realize what it means to most people because he knows about what to expect. The patient often has an operation urged upon him unexpectedly and in a tactless, even brutal way. The medical adviser is called for to prescribe for a stomach-ache or is consulted by a woman for a seemingly slight menstrual disturbance and is told in the one case that her appendix has ruptured, in the other that a uterine cancer is developing and that an operation, which may prove fatal, is absolutely necessary if her life is to be saved. On the other hand, a comparatively simple operation, requiring a few days' hospital care, may be suggested, the patient thinks at once of the neighbor who went to the same hospital and was brought home in a coffin. Is it any wonder that they become frightened? Do we always take time to explain the hopeful side of the situation? Are we a sympathetic friend in the time of trouble or a cold-blooded professional machine? The anaesthetic, which I grant is to be properly given, is a great source of fear. The fright thus engendered, I am certain, has ended the lives of many patients. Fear or worry may bring on a cardiac arrhythmia, may cause a lowered blood pressure and add greatly to the effects of surgical shock. Reissner and others have shown that cardiac arrhythmia and circulatory depression may be caused by stimulation descending from the cerebral cortex. Janeway has shown that fright may cause a decided cardiac acceleration and rise

in blood pressure followed by a fall in force and pressure which descends very much below the normal. If such a patient undergoes much surgical shock or has a chronic myocarditis, a condition whose importance we are only beginning to realize, a fatal result can and does occur very quickly. One of the most vivid memories I have of my undergraduate days is of seeing a colored man brought into the operating room of a City and County Hospital. He took one look at the surgeons, the operating table and the amphitheater filled with students and bolted for the door. The attendants caught him and put him on the table. Ether was administered by the old suffocating cone method. The man died during the course of the operation, which was only a simple one for anal fistula. This man was scared to death and I am sure that many others, while they may be handled in a less brutal way, have likewise succumbed through fright. This element can be almost completely controlled by a little quiet talk with the patient beforehand, explaining how easy and simple the etherization is accomplished by the use of suggestion while it is being given and especially the administration of either morphine and scopolamine or that which I prefer morphine and atropine one-half hour before the etherization is begun, after which the patient should be kept quiet. This quiets the nervous system, induces more or less lethargy and drowsiness on the part of the patient and lessens greatly the amount of anaesthetic required. If the anaesthetist is familiar with the pain areas and the steps of the operation, much of it can be done under the morprine effect alone. I feel that

too much stress cannot be laid upon the proper preparation of the patient physically for the administration of the anaesthetic.

The operation having been performed successfully, what further duty has the surgeon to his patient? I was in attendance upon the clinic of one of our master surgeons not long ago and was surprised to hear that in many cases he did not see his patients during their convalescence, the after care being left almost entirely to the hospital matron, nurse and interne. That is all wrong. These patients are resting their hopes of future happiness and in fact their very earthly existence upon this man and his skill. Oftentimes it is his courage and hopeful personality that must be depended upon to carry them over the crisis of their illness. It is not right that this should be withheld. I remember (if a personal allusion may be pardoned) when I was once critically ill following a laparotomy when it seemed that I could not muster strength for another breath, how I was strengthened by the visits and assurance of my surgeons, one a short-tempered, martinet, gruff and outspoken, had a smile and a word of encouragement, that invariably came before he left the room, which transformed that sick room for the rest of the day. No nurse can attend to the details of after care like the surgeon himself and his hand should be ever on the case. He has no right to take more patients than he can himself properly supervise. This is a right that the patient can justly demand. There are four disabilities aside from the nursing and general care of the patient that should be cared for and watched by the surgeon himself:

1st. Shock—this I need not dwell upon since all are familiar with its symptoms and treatment. 2nd. Nausea—the adoption of the preanaesthetic administration of the morphine-atropine injection and the gastric lavage at the termination of each anaesthesia, I wish to urge upon you. One prevents the excessive flow of mucous which so often fouls the stomach; the other washes out any foul or irritating material that may be therein. Both procedures greatly reduce the likelihood of vomiting.

3rd. Pain—enough heroin should be given to keep the patient reasonably comfortable. I do not believe that this can do any harm. The old idea that because of a possible check of the normal secretions, a patient should be allowed to suffer the tortures of hell after an operation, I do not find borne out by experience. I use heroin and morphine quite freely, keep my patients reasonably comfortable and I believe that my results are better and my patients better satisfied than is the case with my colleagues who allow their patients to fight it out without help. If my first statement was correct, viz. that among his rights, the patient should demand a minimum amount of discomfort then my course certainly is justified.

The fourth line of responsibility that too often is absolutely ignored by the surgeon is the detail of the nurses care. We order certain articles of diet for a patient but how many of us know whether they are prepared and served in a proper or appetizing manner? If a patient must lie in bed for days or weeks, do we remind the nurse to watch for possible bed sores? How many of us realize that a common old

backache which may be relieved by a few minutes massage or a mild mustard plaster, may if not so relieved cause a sleepless night and a backset for the patient? How many of us caution the nurse in charge not to allow the hot water bags to burn a patient who has been put to bed while still under the influence of an anaesthetic? A bed sore or a burn certainly does not allow a person to recover with a minimum of discomfort. We say that these and kindred details are outside the surgeon's duty and that upon the hospital matron and nurse this responsibility rests. Unfortunately for us, courts of law do not so hold. I am not arguing that the surgeon should be the nurse but I do think that he should investigate the care of his patients sufficiently often to let the nurse and matron know that any neglect will be discovered and draw forth a severe reprimand. One of my colleagues in charge of a County hospital was assessed a fine of \$500 in the Superior Court as damages claimed by a patient upon whom he operat-

ed and who after the operation sustained a burn upon his leg because of contact with a hot water bag which had been improperly placed by the nurse. I have made it a rule for three years to caution the matron and nurse after each operation not to burn the patient and in spite of that I have seen three burns caused in that manner during the past year.

This argument might be prolonged indefinitely, many of these statements are so elementary that it seems rather foolish to take the time of this assemblage for their presentation, but after undergoing serious surgical work myself, after an experience of seventeen years in active surgical and medical practice, I am convinced that true success in practice in accordance with the definition laid down early in this paper, viz: is very largely dependent upon attention to these details. Lack of time is no excuse—no surgeon is justified in taking one more patient than can be looked after properly until he is discharged as nearly physically sound as modern skill and care can make him.

Foreign Bodies in the Eye

Read before the Second Annual Meeting of the Railway Surgeons of the Southwest at El Paso, Texas, October 29th, 1911.

Dr. J. B. Gray, El Paso, Texas.

The subject of Foreign Bodies in the Eye will always have a place on programs of Railway Surgeons' Associations, as well as be of interest to its members, from the fact that it consists of no inconsiderable part of the work of the Railway Surgeon. In every day practice injuries of the eye constitute upward of 25 per cent of all ophthalmic cases. In railway work fully 75 per cent, according to my records, will be injury cases and 60 to 65 per cent of these cases will be foreign bodies in the eye. The subject is a large one and one which I regard as the most interesting chapter in ophthalmology. A complete elucidation of the entire subject would consume more time than is desired, or ordinarily allowed. Therefore, for this reason, I shall for the sake of brevity and description, divide the subject into "Extra Ocular or Superficial Foreign Bodies" and "Intra Ocular, or Deep Foreign Bodies," giving to each part of the subject such attention as seems significant to a clear understanding and eliminating such details as can best be dispensed with.

As railroad surgeons we are often called upon to remove a foreign sub-

stance from an eye of an employee or passenger, and while the operation in the majority of cases is simple enough, it is quite often difficult, and the ease with which it is accomplished, and properly so, is usually in direct ratio to the surgeon's familiarity and experience in the proper procedure. An eye in which there is a foreign body (or recently has been), superficial and trivial as it may sometimes seem, may be jeopardized by such to the extent of loss of sight of the eye, or possibly the loss of the eye ball. These are facts fresh in the minds of men whose work enables them to see many foreign body cases. The frequency of this class of railroad work makes it paramount above all other eye work, that we become so familiar with this operation in ocular surgery that when it is finished we know it is done right and that we may render efficient service to our patients, and become the more deserving of the position and confidence which our chief surgeons and the railroad bestows upon us. Our patients are usually appreciative of efficient service along the line of rendering them the desired relief of a

foreign body in the eye and strange to say, many of them know when they are getting it, while on the other hand, others do not know nor seem to care and will allow Tom, Dick and Harry to exercise their skill and usually when the trio finish their job, the foreign body is not removed, the patient in more pain and his corneal abrasion sufficiently infected to endanger the usefulness, if not the loss of the eye. He will then come to you or me for relief, and assert that he is very particular about his eyes.

"Extra Ocular" or Superficial Foreign Bodies in the eye are of such variety as to render them almost innumerable. The many divisions and subdivisions of the work of the railroad employee naturally accounts for this. The foreign bodies most frequently encountered are sand, cinders, iron, steel, emery, iron rust, pieces of coal and wood, splinters, brass, pieces of glass from broken water gauges, etc. Other injuries hardly to be classed as foreign bodies, and not applicable to this paper, are hot water and hot oil burns, steam and lime burns, etc. There are many others, but these most frequent.

A few years ago, and just prior to the advent of the oil burning locomotive, and on some of the roads still, cinders in the eye were the most common foreign bodies which we encountered. This once common foreign body is rarely encountered nowadays on the former roads, and instead we find particles of sand very frequently as it is used in oil burning locomotives by enginemen in blowing quantities of it through the flues to keep them clean, and they frequently get such foreign bodies in the eyes after it passes through the flues.

The first thing to determine in a supposedly foreign body case, is whether there is or is not a foreign body in the eye—don't take anybody's word for it, see it for yourself and to your own satisfaction. This much information can positively be known in nearly every instance, if you go about it in the right way, and is well worth your time and trouble to have facts to work on instead of hearsay evidence, as your patient will sometimes tell you, upon consulting you, that the foreign body has been removed, or some one tried and thought they got it out.

An examination for a foreign body, especially a superficial one, is best made by having your patient seated in front of a large window where a good light may be obtained. It is good practice, and a habit you will soon acquire because it is good, of first cleansing the lids and surrounding skin with a solution of Sat. Boric Acid or alcohol carefully used. The latter, if the lids and surrounding skin seem particularly dirty and soiled from being handled with dirty hands. This being particularly true of shopmen before you see them. This being done, and the surgeon's hands being sterile as near as possible, the eyelids are gently separated, as they are nearly always closed, if the eye contains a foreign body. Standing to the right of the patient, the patient's head made to rest comfortably on the headrest of the chair, if in your office, with the thumb or index finger of the left hand for the upper lids, and the thumb of the right hand for the lower lids, the lids are gently separated, exposing the entire eyeball. You should quickly observe the cornea for the presence of the foreign body. With a good light from the window and a

quick trained eye of the observer, the examination of the cornea will often times take but a few seconds. Failing to locate it at first sight, have the patient follow the movements of the fingers held directly in front so the light from the window will fall upon the different surfaces of the cornea; a broken surface in the smooth cornea will often locate to you the foreign body. Should you not have been successful so far, lateral concentration of light upon the cornea, with a strong convex lens of 20 diopters will be of material aid in diagnosis. You can use this concentration lens with light from the window, or in the dark room from gas candle or electric light. Usually to save time I am in the habit of using light from the window, which lights up the cornea fairly well and rarely find it necessary to move the patient from the chair for further examination in the dark room with stronger artificial light. The latter, is, of course, more efficient, and if there is a foreign body present on the cornea you will most undoubtedly locate it by this means of lateral illumination. Ordinarily, there is not much difficulty in locating a foreign body on the cornea, except in those cases where extremely small particles are imbedded. Foreign bodies in the eye are so much more likely to be found on the cornea than anywhere else it is my custom to first look for them here, despite the fact the patient will tell you it is under the upper eye lid. Nine times out of ten you will find it on the eye ball. The color of the iris back of the foreign body will sometimes aid, or be a detriment to you in enabling you to locate foreign bodies on the cornea, depending on the color. Dark

objects having a blue or gray iris for a back ground are readily seen. Light foreign bodies, such as sand, are not difficult to see where you have a dark iris for a back ground, but cinders or other dark objects with a dark iris for a back ground are sometimes difficult to see.

Having satisfied yourself that the foreign body is not on the cornea and the presence of the intruder not yet revealed, it will now be necessary to search further for it beneath the upper lid. This is done by everting the upper lid in the following matter: Have the patient look down, keeping both eyes open, and with the finger and thumb of the left hand catch the eye lashes of the upper lid and pull gently downward and outward, and before your patient has time to look up, which they most invariably do, make a gentle pressure with a cotton applicator, held in the right hand, on the outer surface of the lid opposite the upper margin of the cartilage, and a little uplift of the lid margin, and the lid is everted. A foreign body, if present, is seen without difficulty and should at once be removed before replacing the lid. The corneal loupe which consists of two magnifying lenses, each containing a prism base to converge the rays of light sufficiently to give binocular vision only two or three inches from the eye, is recommended by most authorities, is rarely used, and I have never found use for it in searching for corneal foreign bodies.

Fluorescin Sol 2% is also recommended to be useful, dropped into the eye to locate a small hair line or abrasion of the cornea or foreign body. Its power of staining an abraded surface yellowish green, will some

times enable you to locate it. This expedient always occurred to me as being a safe and easy diagnostic procedure for the physician whose own vision was very poor and having to resort to it to locate an ulcer abrasion, or foreign body, should not be doing this class of work.

Valuable information may be obtained by closely observing your patient who has a foreign body in the eye. If the foreign body has been in the eye for a half hour, or longer, you will notice a marked congestion of the conjunctiva near the foreign body. If the foreign body is on the cornea, the congestion will be on the Periphery nearest it; if on the bulbar conjunctiva the congested conjunctiva will surround it and the white scleral background will plainly show the foreign body. These, of course, are the easiest seen of all of them.

The pain in superficial foreign bodies is variable—most of you have experienced it and can testify that it is usually very severe. Foreign bodies on the cornea are usually more painful and produce more suffering, than those situated under the eyelid. Strange as it may seem and sound, but actual observation bears me out in the statement, that a cinder or superficial foreign bodies, as a *rule* produce more pain and suffering to the patient than larger foreign bodies, such as iron, etc., that penetrate the coats of the eye and enter the Vitreous. This statement is true only of foreign bodies that enter the eye ball back of the iris and lens. Patients sometimes think that they are not seriously injured, and there is nothing in the eye, the pain being moderate in the latter cases. You should be careful not to think likewise

in all such cases and agree with their diagnosis, for their wish is usually father of the thought.

TREATMENT

The treatment of "Extra-Ocular" and "Intra-Ocular" Foreign Bodies being so essentially different, and as I shall only touch upon the treatment of the latter in referring to it, I will now give you the result of my experience and manner of treating superficial Foreign Bodies in the Eye. Foreign bodies located under the eye lids offer no difficulty in their removal. By simply everting the eye lid in the manner already given in this paper the foreign body may be easily removed with a cotton wrapped applicator. The most difficult part of this little operation to many physicians is the everting the lids. Foreign bodies are rarely encountered upon the Bulbar-conjunctiva, but are quite frequently found beneath it. Their removal is best accomplished by FIRST: Anesthetizing the eye by dropping into the Conjunctival Sac three or four drops of 4% sterile Sol. Cocaine. This one instillation is hardly sufficient for foreign bodies imbedded beneath the Conjunctiva and had best be repeated at the end of five Bulbar Conjunctiva without anesthesminutes. Now and then it is possible to remove a foreign body from the tizing it but not without considerable pain. With a cotton wrapped probe or applicator, or the blunt end of an eye spud, the foreign body may be easily dislodged or removed.

Foreign bodies which penetrate the Bulbar Conjunctiva are more difficult of removal and it is well for you to determine first whether it is on the surface, or beneath the Conjunctiva, before proceeding to remove it. Sub-

Conjunctival foreign bodies are very deceptive in their appearance and you will sometimes think they are on the surface of the Conjunctiva and easily removed. You proceed to remove it with a dull end of the spud and find it does not come away easily; you will probably chase it around over the eye ball, covering the area of a dime, and then possibly lose it in the hemorrhage you set up in digging for it, especially so if the object is a very small one. I followed this plan of removal until I learned better. For the benefit of those of you who are having the same trouble with these sub-Conjunctiva foreign bodies, will say that you can most efficiently accomplish their removal by picking up the foreign body and the Conjunctiva covering it with a very small pointed forcep and a pair of scissors, curved on the flat, also with small points, clip off the foreign body. You will do less harm to surrounding tissue this way, and with a bandage to cover the eye for twenty-four hours the loss of the Conjunctiva does not amount to anything. It is almost impossible to get one of these foreign bodies out of the hole in the conjunctiva which it entered. The removal of foreign bodies from the cornea can only be satisfactorily accomplished by having the cornea anesthetized with a local anesthetic in the manner already given. Keeping the eye closed during the use of the cocaine prevents it drying or desquamation. Aside from this, which you can prevent, and the dilatation of the Pupil, which is transient and hardly to be considered, cocaine anesthesia is ideal for removal of foreign bodies from the eye. Now and then you will meet one of the wise ones who object

to the use of cocaine in the eye, if they find out you are going to use it before you do so. They know more about the deleterious effects of cocaine in the eye than you or I ever heard of. I usually explain frankly to these skeptical ones that no harm will come from its use and that they have been misinformed. If they still object, I proceed to remove the foreign body without it and usually do not get it, but after the first attempt I have converted them to permit its use and that their fears were without foundation.

Foreign bodies in or on the cornea should, generally speaking, offer few difficulties, and yet in many instances one sees some very bungling attempts in which more harm has been done to the cornea than the foreign body would have done. A good light and a sterile instrument are essential to good results. The eye spud with its spear and probe point, and familiar to you all, is the best instrument for removing superficial foreign bodies from the eye. Placing the instrument in alcohol 70 to 95% for a few minutes, will render it safe for use. Having attended to these points, have your patient seated before a good light from window, and standing to the right of the patient separate the eye lids, as already given. Have the patient keep both eyes open and fix the eyes on a spot previously indicated in a direction best suited to you in seeing the foreign body on the cornea. Keeping both eyes open enables the patient to hold more steadily. With the assurance you will not hurt, you can then place the sharp point of the instrument against the foreign body and gently remove it from its bed. This little operation tests the operator's ability as to the steadiness

of his nerves, so that he place the fine point of the instrument right at the foreign body, remove without disturbing the surrounding corneal tissue. Good vision is also very necessary. After removing the foreign body in this way, the eye should be washed with Sat Sol. Acid Boracic. A bandage or cover is not essential in all cases, though theoretically it is but hardly practical. Where you expect much reaction and is already present when you see the case, both a bandage and Atropin Sol. must be used. Cold compresses and a dark room for twelve to twenty-four hours, in severe cases, adds much to the comfort. Dark smoked glasses may replace the bandage after the first day or so. Where the foreign body has been in the eye for a day or two there is usually much reaction, possibly an Iritis in some cases, and you will most likely have to use Atropin Sol., of the usual strength, Atropin Sol., of the usual strength, grs. IV to Oz until the or four drops every three or four hours will usually suffice, and will give a great deal of relief from pain. In cases of steel, iron or cinder, and occasionally sand foreign bodies which have been imbedded in the cornea 24 hours or more, after their removal you will see a ring of dark brown stain where the foreign body was located. Fuchs says this is oxidized iron which the surrounding tissue takes up. I do not think these rings remaining are necessarily from iron, as I have seen them following cinders. They had best be removed by curetting them away and are often harder to remove than the foreign body. They will in months disappear by becoming absorbed, so it

is best to remove them. Opacities following foreign bodies on the cornea and their damage to vision would make another story and cannot be discussed here. Foreign bodies on the cornea if not removed are expelled by suppuration and are apt to leave corneal opacities; while this process is taking place you are likely to get Iritis, Hypopyon and many other complications. In foreign bodies in the deep layers of the cornea, it is usually necessary to incise the layers of the cornea covering it and extract with forceps, or small magnet. If it penetrates the anterior chamber, you are likely to get it best by making a marginal incision and extracting it with bent cycle shaped knife or probe. The magnet, with weak current, can successfully be used in many such cases. Minute foreign bodies on the cornea, which are difficult to see much less remove, can be removed in the dark room by concentrated light thrown upon the cornea by an assistant. You can do it yourself, if an assistant be not at hand, as I have done it many times, but you will not appreciate the difficulty of the proposition of holding the eye lids open and concentrating lens in one hand, your instrument in the other, until you have tried it.

This brings us to briefly consider "Intra-Ocular" or "Deep Foreign Bodies." A thorough treatment of this division of the subject would call for too much of your valuable time, and will be reserved for a future paper, but I cannot refrain from making a few remarks, while on the subject, and call your attention to a few points in handling such cases along the line of First Aid Work. It is in this class of injuries where the most destruc-

tion and damage is done to this most perfect and priceless of our special senses—that of sight. “Intra-Ocular” foreign bodies consist usually in railway work of pieces of steel, iron, brass, babbit metal, copper, glass, stone, etc. This about covers the list which we encounter. Steel and iron foreign bodies are by far the most frequent. Mechanics in all trades are the victims to such accidents of getting foreign bodies in the eye ball. Machinists and their helpers, boiler makers and their helpers are the usual victims of such accidents, naturally from the class of hazardous work at which they are engaged. I can only dwell long enough on this part of the subject to point out the dangers of foreign bodies in the eye ball. You should regard every case of penetrating wound of the eye ball as serious, whether it is known or not to contain a foreign body. Your early recognition and promptness in doing so, may, and will in many cases, save an eye for some employee some litigation for the railroad and a great deal of everlasting satisfaction of knowing you are practicing modern medicine and are doing the greatest good to the greatest number by your timely recognition and prompt first aid to these injuries, of which I speak. The work of caring for these cases is the work of an oculist and I am convinced from experience, that when we get these foreign body cases as early as possible after the injury, the better the chance of saving the eye. Some of these cases are hopeless from the beginning. An eye in which there is a piece of iron, steel or other foreign body and the foreign body is not removed, is a dangerous

eye and will sooner or later become blind and give trouble. It may be a year, ten years, twenty years, or possibly longer, but you can count on it as having trouble ahead. Cases have been recorded in which pieces of iron or steel have been tolerated in the eye for a considerable length of time, some being encysted and remaining quiet, but they are so rare that we cannot attach any weight to them regarding prognosis or treatment. We must assume always in these Intral Ocular foreign body cases, if the foreign body is left in the eye, the eye is sure of destruction and a strong probability of causing sympathetic inflammation and loss of the fellow eye. It is very essential, as stated above, that these cases of foreign bodies in the eye ball, or what is the same thing, until you have positive evidence to the contrary (a perforating wound of the eye ball), that they are sent to an oculist at the earliest possible moment. An early examination in such cases will sometimes permit of an ophthalmoscope examination and location of the foreign body before the media have become turbid, such as lens opacity, if the lens have been injured. Most foreign bodies enter the eye ball through the cornea and cause the lens to become opaque, as well as hemorrhage in the anterior chamber and vitreous. When such is the case the use of the ophthalmoscope in locating the foreign body is prohibited and resort much be made to the X-Ray. By this means we are enabled as a rule, to determine positively if a foreign body is in the eye ball. Once this point in the diagnosis has been made, the future handling of the case can much better be determined. If the foreign body happens to be iron or

steel, which is the most frequent found in the eye ball, its removal can, in most cases, be accomplished by the use of the magnet—the details of which operation cannot be given at this time. Extraction of foreign bodies from the eye ball back of the lens, not composed of iron, are incomparably more complicated. The chances of their removal are very doubtful. They may sometimes be removed through a scleral incision after being located with the X Ray. The handling of these cases requires from the time of the accident good judgment and skill. Those of you who see these perforating wounds of the eye ball before they are seen or referred to the oculist, especially if the case will be more than an hour in reaching the same, I want to recommend these few points on the behalf of the injured, provided you have not already been doing as these suggestions would have you do. **FIRST:** Upon meeting with such injuries of the eye I would reiterate what was said before in this paper in cleansing the field surrounding the eye in superficial foreign bodies. It is essentially more important in this class of injuries to prevent an infection than in the first class, but should not be neglected in either. **SECOND:** Your patient is usually suffering considerably from the blow of the foreign body in striking the eye. It will be well for you to give him some relief at this time which you can effectually do by instilling into the injured eye a few drops of 4% sterile cocaine Sol. You can then examine the eye, see the nature of the wound, use anti-septic wash to cleanse the eye, Sat. Sol. Acid Boracic preferably. Sublimate Solution should not be used; in these cases especially is this true of those

perforating injuries of the cornea. Marple says if you get some of the Sublimate Solution in the anterior chamber, you will likely get a parenchymatous opacity of the cornea. This is the most important reason why it should not be used. Another is that, in a strength sufficient to be of much value it is quite painful. After irrigating the eye you may by chance be able to discover the foreign body of iron, steel, or whatever may have produced the injury, somewhere in the conjunctiva sac, under the upper or lower lid, lying loose in this position, though having perforated the eye ball but not entering it. You can remove the foreign body easily and simplify the after treatment and search for the foreign body by the oculist into whose hands the case is to be referred. It has been my experience to find several large foreign bodies that had perforated the eye ball and located in the conjunctiva sac, as above related. One in particular I recall where I removed a large piece of steel from within the folds of the lower lid, which had perforated the eye ball, and though the patient made good recovery with no loss of vision, sought damages at court but did not recover. At the trial, probably a year later, he had his pupil dilated, ad maximum, for the occasion, probably from the same atropin sol. I had given him during his treatment. Now and then you will find these foreign bodies imbedded in the lids of the eye, projecting through the inner surface and having perforated the eye ball, spent its force and lodged in the lid. It is well to be on the lookout for these things—it's part of the business. Having cleansed the eye externally, relieved the pain, cleansed the

eye and wound with antiseptic wash, examined for foreign body, it will be well and what I regard as vitally important that these cases of foreign bodies in eye ball, or even perforating injuries, be subjected in the earliest possible time to the full beneficial effects of Sol. Atropin. It will be used later but the earlier the better. If by its use you can get a widely dilated pupil, by its use before Iritis or Irido Cylitis has set in you have accomplished a great deal. It is a difficult matter often times to get the maximum dilatation in these cases when they are even a day or more old, and still more difficult when seen later. We cannot successfully treat these cases without the use of atropin. A few drops then of 1% solution at the first dressing and examination and repeated every two or three hours, if the case is still under your observation. By way of illustrating the importance of this point, which I wish to impress upon you of the necessity of using atropin early, I was once consulted and asked to determine the amount of vision a man had lost from being struck in his eye by a piece of flying steel. I saw him some months after the accident when the eye had become quiet. There had not been a perforation of the eye ball

in this case, nor had there been an injury to the cornea or lens, simply a blow upon the eye ball. There was considerable reaction following the injury, an Iritis evidently, though I did not see the case but once and that when it had recovered. When I saw the case there was a partially dilated pupil, with Posterior Synechiae and a stippling of the anterior lense capsule from Iritic adhesions. There was loss of four-fifths vision of this eye, all due to this Iris Pigment and tissue of the pupillary space and resembled having had a hand full of sand thrown upon the lens. Had this stippling been peripheric the damage to vision would have been but little, but being central was considerable. Had atropin been used vigorously and early gotten the Iris out of the way of central vision, and even though Iritis had become severe the ultimate loss of vision would have been practically nil. There was recovery of damages in this case. I do not know how much atropin was used in this case but quite evidently not enough nor early enough.

I hope the point is clear—a sterile Gauze Compress, preferably cold and a well applied bandage and you have done your duty and accomplished all that can be done in First Aid to these injuries.

The Importation of Hookworm Disease

By Dr. John W. Colbert, Albuquerque, N.M.

Read before the Second Annual Meeting of the Railway Surgeons of the Southwest at El Paso, Texas, October 29th, 1911.

Hookworm Disease is an imported disease, and its "import tax" has of a certainty been paid in blood—the purest Anglo-Saxon blood in America.

The negroes, who came over from Africa in the slave ships first brought the disease to American soil, and for many years it was confined entirely to the negroes. A hundred years ago the disease began to develop among the whites in the southern part of our nation, and today over two million whites in the Southern States harbor the parasite—and this parasite is responsible for lowering the working efficiency of these two million people; for establishing a death-rate higher than that of Tuberculosis, or Typhoid fever, or even Yellow fever in its palmyest days; for greatly retarding the agricultural and industrial growth of the South; and for costing hundreds of millions of dollars to the country—until today the eradication of the parasite is preeminently the problem of the South.

In Porto Rico, where this disease is more pronounced and more prevalent than in any spot on the globe, the parasite was also imported by the negro slave—but at a much earlier date, probably in the sixteenth century. For many years the disease was confined to the coast, where the negroes

worked in the sugar mills, but later the coffee culture carried the negroes into the mountain regions, and the disease gained a foothold all over the little island, until a few years ago ninety per cent of the rural population or eighty per cent of the entire population of the island harbored the parasite.

Six years ago the Hookworm was unheard of in California. Early in 1905 Dr. Herbert Gunn of San Francisco called attention to the fact that a large number of Porto Ricans were settling in California, and that over fifty per cent of them were Hookworm carriers. In August, 1910, I read a paper before the Pacific Coast Railway Surgeons Association, calling attention to the fact that the disease was being brought into California from Mexico by the track laborers employed by the Santa Fe and Southern Pacific Railroad Companies. A few weeks later Passed Assistant Surgeon Glover of the U. S. Public Health and Marine Hospital Service found that the disease was also being brought into California by Hindu laborers. Later in the same year Dr. Gunn investigated some of the gold mines of California and found that the disease was endemic in most of the mines, and in some of the mines 75% of the men

were infected—and I do not believe that I overestimate it when I claim that there are upwards of fifty thousand cases of Hookworm Disease in California today.

Last month I read a paper before the New Mexico Medical Society at Las Vegas relative to Hookworm Disease in the Southwest, especially referable to its presence in New Mexico and Arizona, and as some of the men present here today heard that paper, I only wish to say that there has been a marked increase of imported cases in our two new states since the cessation of the Mexican insurrection.

And now—how about Texas? To your state, gentlemen, belongs the credit of first bringing the attention of the profession to the fact that Hookworm Disease was present on American soil. Dr. Allen J. Smith, now Dean of the medical department of the University of Pennsylvania, while a teacher in your medical school at Galveston in 1895—two years before Dr. Stiles even began to predict the presence of Hookworm Disease in the South—found the Hookworm ova in a specimen from one of his patients, and the account was published by Dr. M. C. Shaffer in the "Texas Medical News", and six years later—on Dec. 21st, 1901, Dr. Smith found in the Marine Hospital at Galveston a sailor with a well defined case of Hookworm infection, which had been imported from Chiapas, Mexico. Dr. Schaffer on making a microscopical examination of this case discovered a great number of ova, which were identified by Dr. Smith as Hookworm ova. Dr. Smith then examined the medical students of his class, and found eight men infected out of eighty-six—and all of the men found to be infected were residents of Texas. Some of Dr.

Smith's specimens were sent to Dr. Stiles upon request. About this time Dr. Stiles had also received samples of the parasites found in Porto Rico by Dr. Ashford. Upon a close microscopical examination of his specimens Dr. Smith found them to differ from the Old-World variety—and while he was writing his paper, describing this new American variety of the Hookworm he received by mail a little pamphlet written by Dr. Stiles, under date of May 10, 1902, announcing the new American Hookworm, and so to Dr. Stiles went the honor of the discovery, and in Dec. 1902 at the Pan-American Sanitary Congress he made a general public announcement of the discovery and economic importance of the American Hookworm—but to Dr. Smith justly belongs the credit of being the first American scientist to isolate and describe the American variety of the Hookworm parasite,—and this fact alone should be sufficient reason for Texas taking an interest in the Hookworm problem. Add to this the fact that the first group of patients—Dr. Smith's eight students—were all residents of Texas; that El Paso is the port of entry for many imported cases, which are setting up new foci of infection all along the lines of railway in California, New Mexico, Arizona, Kansas, and Colorado; that the Rockefeller Sanitary Commission has already demonstrated the presence of Hookworm Disease in border counties of Louisiana on the east and in the two border counties of Arkansas on the northeast corner of the state, and you have every reason to "sit up and take notice."—And yet, for some reason, which I am at a loss to understand, your state has refused the proffered aid of the Rockefeller Sanitary Commis-

sion in eradicating the disease.

The fact that Hookworm infection prevails to such a large extent in the southern part of the United States has had a tendency to cause us western physicians to think of the Hookworm as a distinctly southern problem. But we have in Hookworm Disease a problem that should be studied by all the western men interested in public health as well as by the men of the south. True most of your cases today are only imported ones. The same was true of the South a hundred years ago, of Porto Rico three or four hundred years ago and of California only six years ago. Irrigation projects are becoming extensive all through the southwest today, and the soil, moisture, and the temperature at certain times of the year, are ideal for the propagation of the parasite. I would strongly urge that you physicians of the Southwest take up this question and study it carefully, for you cannot tell how soon it will come to your own doors. It is a true and useful maxim in public

health circles that "prevention is better than cure,"—and in this day of preventive medicine, it seems to me that our best efforts should be put forward to prevent the spread throughout the Southwest of this great scourge. I have believed ever since I found the disease so prevalent among the Mexican track laborers that some day we might find the disease endemic and the infection extensive along the territory supplied by these men. I hope we will not, for it is quite a different thing when it comes home to you, and you have to fight it at your own door, from when it is away off in Porto Rico, or in the Southern States. The practitioner of the Southwest—especially the Railroad Surgeon should always keep this disease in mind, especially when any case of anaemia presents itself. And in order to bring the important factors of the disease before you, I wish to encroach upon your time just a few minutes more—long enough to throw a few slides upon the screen.

Proposed Medical Legislation

A BILL

For an Act to Regulate the Practice of Medicine and Osteopathy in the State of New Mexico, and for other Purposes.

Sec. 1.

Be it enacted by the Legislature of the State of New Mexico:

CREATION—QUALIFICATION —APPOINTMENT

That a Board to be known as the State Medical Board of the State of New Mexico is hereby established. Said Board shall consist of seven members, six of whom shall be practitioners of medicine, of known ability, and one practitioner of Osteopathy; all of whom shall be graduates of colleges in good standing in the school of practice to which said practitioner belongs; who have been citizens of the United States of America for at least five years, who are registered practitioners in and who have been bona fide residents of New Mexico, and active practitioners for at least five years immediately prior to their appointment. The members of said board shall be appointed by the Governor of New Mexico within thirty days after this act shall take effect. The governor, in making said appointments, shall observe the following provisions, to wit:

FIRST:—He shall appoint three

members from the regular school or system of medicine.

SECOND:—He shall appoint one member from each of the schools or systems known as the Homeopathic, Eclectic and Osteopathic.

THIRD:—The remaining member of said board shall be appointed from among the entire body of legally qualified practitioners of the state, of whatever school or system, in the discretion of the Governor.

FOURTH:—Two members of said board shall be appointed from that part of the state which lies north of the third Standard Parallel North; two from that part of the state which lies between the third Standard Parallel North and the Second Standard Parallel South and two from that part of the state which lies south of the Second Standard Parallel South.

FIFTH:—The remaining member of said board shall be appointed from the state at large in the discretion of the Governor.

SIXTH:—The New Mexico Medical Society, representing the "regular" school or system of practice, may within twenty days after this act becomes a law, and biennially thereafter at a date not later than the first day of October, nominate to the Governor a list of not less than nine (9) names of persons le-

gally qualified for appointment under the provisions of this act, in which case, the appointments to which said school or system of practice is entitled may be made from such list.

SEVENTH:—In like manner a state organization, representing either of the other schools or systems of practice above mentioned, may nominate to the Governor a list of not less than three names from which the appointment to which that school or system of practice is entitled may be made.

EIGHTH:—In case it shall occur at any time an appointment is to be made to represent any one of the schools or systems of practice above mentioned, that there shall not be within the state any practitioner of said school or system of practice and willing to serve, then such appointment shall be made as provided in paragraph third, of this section.

NINTH:—The term of office of the members of this board shall be as follows, to wit: one member shall be designated to serve for a period of "one" year, two "two" years, two "three" years and two "four" years; and thereafter the Governor shall fill all vacancies caused by virtue of any term of office expiring, in the same manner as in the original appointment, said appointee to serve four years; provided, no one shall be eligible to serve on said board for more than two successive terms of appointment. Vacancies occurring on account of death, removal or resignation from office shall be filled by the Governor for the unexpired term. The Governor shall remove from office any member who shall fail to perform his duties as a member of said board.

The members of said board shall qualify as the Board of Regents of the University of New Mexico are required to do.

Sec. 2. Organization

The board shall organize and elect one of its members president, one as vice president, one as secretary and one as treasurer within thirty days after the appointment of its members, and biennially thereafter at the December meeting.

Meetings.

Said board shall hold regular meetings on the first Mondays in June and December of each year at Santa Fe, New Mexico, which meetings shall be announced by publication in at least two daily papers in different parts of New Mexico for at least two weeks before such meetings. Said board may

11 special meetings at any time and place in New Mexico, which may be agreed upon by a majority of the members of the board. Five members of this board shall constitute a **quorum** for the transaction of all business.

Sec. 3. Requirements. Examinations.

Every person who desires to practice medicine and surgery in New Mexico must have the certificate herein provided for. In order to procure such certificate he shall file with the secretary of said State Medical Board a written application, under oath, on a form prescribed by the board, and furnish satisfactory proof that he is more than 21 years of age and of good moral character. The applicant shall also produce a diploma issued by some legally chartered medical school, in good standing, the requirements of which school shall have been, at the time of granting said diploma, in no particular less than those prescribed by the Association of Ameri-

can Medical Colleges for that year, or he must produce satisfactory evidence of having possessed such diploma. Said applicant must also file with such diploma or such evidence, an affidavit, sworn to before some person authorized to administer oaths, stating that said applicant is the identical person named in said diploma and the lawful holder thereof, and that the same was procured in the regular course of instruction and examination and without fraud or misrepresentation, such affidavit to have attached to it a recent photograph of the applicant, which photograph shall be certified to on its face or its back by the signature and seal of the officer before whom said affidavit is made. All applicants who shall fail to meet the above requirements must be rejected.

In addition to the requirements above set forth, all applicants must be personally examined by said board as to their qualifications to treat the sick or afflicted as defined in section nine of this act. The examination shall be conducted in the English language, and shall be in writing, and shall be on the following subjects, to wit; Anatomy, Physiology, Pathology, Bacteriology, Chemistry and Toxicology, Surgery, Obstetrics, Physical Diagnosis, Materia Medica and Therapeutics and Practice of Medicine. The examination "Materia Medica" and "Therapeutics and Practice" shall be conducted by those members only, of the board, who belong to the same school as does the applicant for license. Examinations shall be practical in character and designed to discover the applicants fitness to practice medicine and surgery. Examinations in each subject shall consist of not less than ten questions, an-

swers to which shall be graded upon a scale of "zero" to "ten." All members of the board may, and at least three must, examine and mark the answers to each question, and the average of all marks to each answer shall be the value which shall be given to that answer in computing the result. In this examination the applicant shall be required to make a general average of not less than 75 per cent, and if he fall below 60 per cent in any one branch, he shall be refused license; provided, each applicant, in his examination, shall be given a credit of five per cent off the general average requirement for each ten years, or major fraction thereof, he has been in actual, continuous practice, in no instance, however, shall the general average be less than 60 per cent, and the applicant shall be required to furnish satisfactory evidence to the board as to the length of time he has practiced medicine, legally, before making said application. If any applicant shall be a practitioner of a system of practice which is not represented on the board, and shall so request, said board shall have the right to invite a practitioner of that system, legally licensed in another state, to assist in such examination; or if any applicant speaking another than the English language, shall request an interpreter, the board shall have the right to secure the services of such interpreter, and may pay to such assistant or such interpreter, out of the funds of the board, the sum of five dollars for each applicant with whose examination he may have assisted, all other expenses incident to the services of such assistant or interpreter must

be paid by the applicant requesting such services.

The examination papers shall form a part of the records of said board, and shall be kept on file by the secretary for at least one year. In examinations, the applicant shall be known and designated by number only, and the name attached to the number shall be kept secret by the secretary until after the board has finally voted upon the application. The secretary of the board shall in no instance participate, as examiner, in any examination held by the board, nor shall he be entitled to vote upon the question of granting any certificate to practice medicine and surgery except in the case of a tie vote when he shall be allowed to cast the deciding vote. At least four members of the board shall vote in favor of granting a certificate to any applicant before such certificate shall be issued, otherwise the applicant shall stand rejected.

Re-examination

If the applicant shall fail in the first or any subsequent examination, he may, at the next or any regular meeting of the board, be re-examined, and shall be required to pay for such re-examination, the full fee.

Vote necessary to rule.

All matters, except the question of granting certificates to practice medicine, shall be decided by a majority vote of those present and voting.

Reciprocity.

The board may, at its own discretion accept and register upon the payment of the registration fee, which registration fee shall be fifty dollars, and without examination of the applicant, any certificate which shall have been issued to him by the Medical ex-

amining board of the District of Columbia or of any of the States or Territories of the United States, provided however; that the legal requirements of such medical examining board shall have been, at the time of issuing such certificate, in no degree or particular less than those of New Mexico at the time such certificate shall be presented for registration to the board created by this act; and provided further, that the provisions in this section contained, shall be held to apply only to such of said examining boards as accept and register the certificates granted by this board without examination by them of the ones holding such certificates.

Sec. 4. Fees.

Each applicant for license to practice medicine in New Mexico, shall pay to the secretary of the State Medical Board a fee of twenty five dollars which shall be paid over to the treasurer of the board by the secretary.

Sec. 5.

License to Practice Medicine and Surgery.

When any applicant shall have shown himself to be possessed of the qualifications herein required and has successfully passed the required examination, a certificate must be issued to him by the board, authorizing him to practice medicine and surgery in this state. Said certificate shall be signed by the president and secretary of said board and sealed with the seal of the board.

Sec. 6. Records of the Board.

The board shall keep a record of its proceedings in a book kept for that purpose, a part of which shall be a register, showing name, age, place and duration of residence of each applicant,

the time spent in medical study in or out of medical schools which have granted said applicant any degree or certificate of attendance upon lectures in medicine; said register shall also show whether said applicant was rejected or licensed and shall be prima facia evidence of all matters therein contained.

Sec. 7. Recording License.

Every person, holding a certificate from said State Medical Board, shall have the same recorded in a book kept for that purpose only in the office of the County Clerk in the county wherein the practitioner resides, within thirty days after said certificate is issued, and the date of recording shall be endorsed on said certificate. Said certificate, or a copy of the registration, must again be recorded in any county to which the practitioner may remove permanently. The fact that no such certificate shall be found recorded in the county where such person is practicing or offering to practice medicine shall be accepted by the court as prima facia evidence that no such certificate has been issued, and shall throw the burden of proving that such person has a certificate upon the defendant in any suit or prosecution begun against him for the violation of the provisions of this act.

Sec. 8. Refusal and Revocation of License.

It is hereby made the duty of this board to refuse to license any person guilty of immoral, dishonorable or unprofessional conduct, and said board shall also revoke and annul any certificate which has been issued by said board, or any previous board, upon satisfactory proof being made to said board under oath, that the holder of

said certificate or diploma has been guilty of immoral, dishonorable or unprofessional conduct. Thirty days notice shall be given, in writing, to the person accused of improper conduct, with a copy of the charge against him, which charge shall be made under oath, requiring him, on a day named, to appear before said board and show cause why his license should not be revoked or cancelled. Such notice shall be personally served upon the defendant and service proven by affidavit of the person serving the same, which affidavit shall be returned to the secretary of the Board, and in case of the absence of the party charged from his usual place of residence, service may be made by leaving a copy at his place of business or residence and proven as so stated; but in case the person has no residence or place of business at his last known address, service may be made in the manner provided by law for service of process upon non-residents.

Should the person accused fail to appear or make satisfactory answer to the board on the day named, his license shall be revoked. When any such license has been revoked or cancelled by said board, the board shall send notice, in writing, under the hand of the secretary and attested by the seal of the board, which notice shall be filed for record and recorded in the book in which the physicians licenses are recorded, in the office of the County Clerk of the county in which the person, whose license has been revoked, resides. Any person whose license has been revoked or cancelled by said board under the provisions of this act, who shall hereafter practice or attempt to practice or offer to practice medicine in New Mex-

ico, shall thereby become guilty of a misdemeanor and shall be punished as provided in section thirteen of this act, and each day's practice or offering to practice shall constitute a separate offense.

Sec. 9. Practice of Medicine Defined.

For the purpose of this act the words "Practice of Medicine" shall mean to open an office for such purpose or to announce to the public or to any individual in any way, or cause the same to be done; a desire or willingness or readiness to treat the sick or afflicted, or to investigate or diagnose any physical or mental ailment of any person; or to suggest, recommend, prescribe or direct, for the use of any person; any drug, medicine, appliance or other agency whether material or not material; for the cure, relief or palliation of any ailment or bodily injury or deformity; after having received, or with the expectation or understanding of receiving therefor, either directly or indirectly, offered, paid or promised; any gift, bonus, fee, present, compensation or reward, or to act as the agent or representative of any person, firm or corporation claiming, advertising or proposing to practice medicine in any other state or territory, provided, nothing in this act shall be construed as to prohibit gratuitous services in case of emergency; nor shall this act apply to commissioned officers in the Army Medical Corps, the Naval Medical Corps and the Marine Hospital Service of the United States; or to a regular, qualified dentist when engaged exclusively in the practice of dentistry; or to legal practitioners of medicine in other States or Territories who may be called in consultation by legal practitioners of medicine in New Mexico;

or to physicians or surgeons residing on the border of a neighboring state and duly authorized under the laws thereof to practice medicine and surgery therein, whose practice extends within the limits of this state, provided, equal rights and privileges are accorded by such neighboring state to the physicians and surgeons of New Mexico who may reside on the border of this state contiguous to such neighboring state. Such practitioners of a neighboring state shall not open an office or appoint a place to see patients or receive calls within the limits of this state; nor shall anything in this act be construed as applying to those persons who are, at the time of the passage of this act, legally qualified practitioners of medicine and surgery under a license issued by any former legally authorized board of New Mexico, provided, however, that all persons now practicing, legally, in this state, any of the systems of practice mentioned in this act shall be required to submit, within one year after this act shall take effect, to the secretary of the State Medical Board, his license and receive in lieu thereof verification license which must be recorded in the office of the County Clerk in the county in which the licensee resides, and all persons failing to comply with this provision shall forfeit their right to practice in this state unless a new license is procured by application and examination as provided in section three (3) of this act.

The applicant for verification license shall pay to the secretary of the board a fee of fifty cents for issuing said license.

Sec. 10. Osteopathic Requirements Examinations.

Applicants for a license to practice

Osteopathy in New Mexico shall be subject to all the provisions of this act except that instead of being required to possess a diploma from a medical college, as specified in section three (3) of this act, they shall be required to file a diploma from a legally chartered college of Osteopathy having a course of instruction, at the time of granting such diploma, of not less than twenty (20) months, requiring actual attendance, and if such diploma was granted subsequent to 1908, a course of not less than three (3) years of nine months each, such course to include all the studies examined upon under the provisions of this act. When such requirements have been complied with the applicant shall be examined by the board in the subjects of Anatomy, Physiology, Pathology, Obstetrics, Physical Diagnosis, Osteopathic Diagnosis, and Principles and Practice of Osteopathy, in the manner and form as specified in this act and on an equal basis with applicants for license to practice medicine and surgery, provided, the examination in Osteopathic Diagnosis and Principles and Practice of Osteopathy shall be conducted by the member of the board representing that school of practice. If such examination is satisfactory to the board, the applicant shall have issued to him by the board a certificate which he must have recorded in the office of the County Clerk in the county in which he proposes to practice, as is required by the provisions of this act in the case of other certificates issued by this board. Such certificate shall authorize the holder thereof to practice Osteopathy in this state but shall not permit him to prescribe drugs or perform major surgery.

Sec. 11. Unprofessional Conduct Defined.

The words "Unprofessional Conduct" as used in this act are hereby declared to mean:—

FIRST:—The procuring, or the aiding or abetting in procuring a criminal abortion.

SECOND:—The wilfully betraying of a professional secret.

THIRD:—All advertising of medical business which is intended or has a tendency to deceive the public or impose upon the credulous or ignorant persons, and so be harmful or injurious to public morals or safety.

FOURTH:—All advertising of any medicine or of any means whereby the monthly periods of women can be regulated or the menstrual function re-established if suppressed.

FIFTH:—Conviction of any offense involving moral turpitude, in which case the record of such conviction shall be conclusive evidence.

SIXTH:—Habitual intemperance.

SEVENTH:—Habitual indulgence in "habit-forming drugs."

EIGHT:—The personation of another licensed practitioner of medicine of a like or different name.

Sec. 12. Salaries.

Each member of the State Medical Board shall receive a salary of ten dollars per day and all necessary expenses while in attendance on any meeting of said board, attendance to include necessary time spent in travel to and from meetings, said salary and expenses to be paid from the fund accumulated by said board for examination, fines and from whatever source provided for under the provisions of this act, provided, any extra services

rendered by any member or members of said board, which extra services shall be authorized by at least five members of said board, and all necessary expenses incurred in the discharge of said extra services in the performance of their duties as members of said board, shall be paid for as though said member or members were in actual attendance on meetings of the board.

Sec. 13. Penalties.

Any person who shall practice, or attempt to practice medicine in New Mexico, without first complying with the provisions of this act shall be guilty of a misdemeanor, and upon conviction thereof, shall be punished by a fine of not less than one hundred dollars and not more than five hundred dollars, or by imprisonment in the county jail not less than ninety days nor more than six months, or by both such fine and imprisonment in the discretion of the court.

Sec. 14. Funds.

All fines collected under the provisions of this act, shall go and be paid by order of the court in which conviction is had, to the said State Medical Board and shall be turned into the treasury of said board. The treasurer of said board shall give bond to the board in the sum of one thousand (\$1,000.00) dollars conditioned upon the faithful performance of his duties as treasurer, and that he shall pay over any and all sums of money received by him as such upon the proper order therefor. Such bond shall be secured by some Fidelity and Surety company authorized to do business in New Mexico, and the premiums paid therefor, shall be paid by the board as one of its necessary expenses. All salaries and ex-

penses of the members of said board necessarily and properly incurred in attending the sessions of said board and for the necessary supplies shall be paid out of the said fund upon the order of the board upon warrant drawn on the treasurer of the board, signed by the president and secretary and bearing the seal of the board. No monies shall be paid out of the treasury of the board unless such payment has been authorized by a majority of the members of the board present and voting. Any funds in the possession of said board may be used in the enforcement of this law in the manner that may see best to said board. The treasurer of said board shall keep a correct and itemized account of all monies received and disbursed, and shall make a report to the board at each regular meeting. The secretary of the board shall be required to report the doings and proceedings of said board, together with the amount of all monies by it received and disbursed, and on what account, with items, on the first day of January of each year, to the Governor of New Mexico.

Sec. 15. Powers of the Board.

The State Medical Board is hereby authorized and empowered to make all necessary rules and regulations for carrying out the provisions of this act, and each member of said board is authorized to administer oaths touching any question under the jurisdiction of said board.

Sec. 16. Repealing Clause.

All acts and parts of acts in conflict with this act are hereby repealed, and this act shall take effect and be in force ninety days after the adjournment of the Legislature.

BOOK REVIEW

OPHTHALMIC MYOLOGY.

By G. C. Savage, M. D., of Nashville,
Tenn.

Second Edition—Revised, Reprinted and Published by the Author, 1911.

The Ophthalmist, knowing the reputation of Dr. G. C. Savage as a student, investigator and authority on muscular disturbances of the eye, will appreciate his late book on Ophthalmic Myology as a book of reference and study.

The subject being more or less complex and treated in the scientific manner that it is, makes it more difficult for the reviewer to make his report as he would like to, as time and study of the subject at hand is required to do so.

The investigations and reports of same are up-to-date and while Dr. Savage does not agree with former authors in many respects, his investigations and experiments are modern and his theory is rational and if the student on Ophthalmic Myology gives it careful study, it will be of great value to him in his work.

It is a book that should be found in the library of every man doing eye work and will be found of great value in reference work.

SURGICAL CLINICS OF JOHN B. MURPHY, M. D.

Volume I., Number I.

THE SURGICAL CLINICS OF JOHN B. MURPHY, M. D., at Mercy Hospital, Chicago. Volume I, Number I. Octavo of 133 pages illustrated. Philadelphia and London: W. B. Saunders Company, 1912. Published Bi-Monthly. Price per year: Paper \$8.00. Cloth, \$12.00.

W. B. SAUNDERS COMPANY
Philadelphia London

The publishers tell us that this, the first number of the "Surgical Clinics of John B. Murphy, M. D.", represents a new departure in medical publishing. It is a departure, however, that must appeal at once to the medical man, because it is extremely practical *clinical* teaching.

These are not students' clinics but Dr. Murphy's famous clinical talks at Mercy Hospital, Chicago, for physicians only. A point we want to mention is that these "Clinics" are published just as delivered by Dr. Murphy, being reported verbatim by an expert medical stenographer. In this way they retain all that individual force and charm so characteristic of the clinical teaching of this distinguished surgeon.

After a careful reading of the greater part of the first volume the

reviewer is glad to say that he believes that the departure will prove a most popular and valuable one, bringing, as it does, the latest thought and work of a master to the general practitioner who is not able to find time to attend these clinics.

The one thing that strikes the reviewer is Dr. Murphy's thoroughness in eliciting the case history, and the bearing of the history, point by point, upon the malady in question. We have no knowledge of any other work that

is of a similar character and that will have so great a tendency to spur the general practitioner to better knowledge of modern thought and tendencies as will this new departure of Saunders in publishing the clinics of Dr. Murphy.

We heartily recommend them to the general practitioner not only for the surgical technique to be learned therein but for the general carefulness and detail that can be learned in the matter of diagnosis.

NEWS NOTES

Dr. C. T. Sands of Las Cruces, is recovering nicely from a bad attack of pneumonia. He will convalesce in California.

Dr. W. E. Sunderland of Estancia after having disposed of his practice is attending a post graduate school in New York. The doctor will return to New Mexico most likely after he completes his course.

Dr. J. H. Worth of Albuquerque, was a visitor to El Paso recently. The doctor is suspected of having gone to take in the sights of the Battle of Juarez.

Dr. Brown of Tucumcari is now the Secretary of the Quay County Medical Society, succeeding Dr. R. J. Thompson. The Quay county Society promises to give a good account of itself before the next regular meeting of the State Society.

Dr. R. J. Thompson of Tucumcari, is spending the latter part of the winter in Phoenix, where Mrs. Thompson, who has not been well for some time, is recuperating.

This month's Journal has been de-

layed in publication owing to the desire to have the last draft of the proposed medical law printed. This law is now complete and will be presented to the legislature in the shape it is here presented.

The Eighth Annual Conference of the American Medical Association on Medical Education, Medical Legislation and Public Health, called by the Council on Medical Education and Council on Health and Public Instruction, will be held in the rooms of the Congress Hotel, Michigan Ave. and Congress St., Chicago, February 26 and 27, 1912.

ONCE AGAIN THE SECRETARY DESIRES TO CALL THE ATTENTION OF THE SECRETARIES OF THE VARIOUS COUNTY SOCIETIES TO THE FACT THAT THE REPORTS ARE PAST DUE. PLEASE REPORT AT ONCE, NAMING THE NEWLY ELECTED OFFICERS AND ALL MATTERS OF INTEREST.

The New Mexico Medical Journal

Volume VII

MARCH, 1912

No. 6

E · D · I · T · O · R · I · A · L

In the president's address, read at the recent meeting of the New Mexico Society for the Prevention and Cure of Tuberculosis, and published in the December issue of the New Mexico Medical Journal, there were certain statements made with reference to the attitude of the Catholic church toward the interruption of pregnancy. We think it unfortunate that in any scientific paper the author deems it proper to mention the attitude of any religious organization in reference to a procedure, the delicacy of which requires the greatest circumspection to determine the proper course.

The opinion of the author of a paper on any subject are seldom shared by all the author's associates. Difference of opinion, be it in affairs of science, church or state, are the greatest of all stimulants to studious research.

Papers are written to express the opinions of the authors thereof. These opinions may be accepted or rejected, in whole or in part, by those who read them or listen to their being read. They are offered in the mental market for their value and are not always accepted for the value put upon them by their author.

The reference of the position of the church in this delicate matter have

been taken exception to by some of the eminent persons of the Catholic faith. We regret that an eminent member of the medical profession should in his zeal for the prevention of so dread a disease find it necessary to criticize the position of a devout ecclesiastical faith. His opinion would have carried as much weight if no religious belief had been mentioned. It is unfortunate that so scientific and enlightened an article should carry expressions that add nothing to its scientific worth, but create criticism of an otherwise very creditable production.

The New Mexico Medical Journal is not responsible for the expressions or opinions of the authors of the articles it publishes. They are published for whatever value they may carry to those who read. The author is alone responsible for his ideas. The discernment of the reader fixes their only market value.

Those to whom are entrusted the care of the body and soul, tread two narrow paths, and tread them side by side. Oftimes the steps of one furnish guidance for the other. There should be no breach between them. They need each other's guidance in sickness and in health.

S. D. SWOPE,

W. T. JOYNER,

Council.

At the last meeting of the New Mexico Medical Society, a communication was received from those engaged in work among the Indians of New Mexico relative to the spread of trachoma. Aid was asked from the society in presenting the subject to the legislature now in session in Santa Fe. This communication was referred to the legislative committee and they will, no doubt, co-operate. Of as great, if not greater, importance is the question of gonorrheal ophthalmia. The cases of this dreaded condition seen by the practitioners of New Mexico—especially those physicians who come into contact with the natives of the lower classes—are far too many, and something ought to be done in an effort to prevent the loss of the eyes of the innocent and helpless new born. Legislative action relative to the installation of nitrate of silver in proper strength into the eyes of the new born should be had. It ought to be made a matter of legislative enactment that each physician and licensed midwife practicing in the state of New Mexico should be compelled to use a one per cent solution of nitrate of silver in each case where he or she is in attendance on a confinement case. We commend this suggestion to the consideration of the legislative committee. These doctors are all well aware of the rapidity with which gonorrheal ophthalmia does damage that results in permanent blindness, and no argument is necessary to prove the necessity of action at this time.

There is to be held in Chicago, April 17, 18 and 19, 1912, a meeting under the auspices of the West Branch of the Chicago Medical Society and the Chi-

cago Medical Society, for the purpose of discussing mental diseases in their various phases. To this meeting the alienists and neurologists of the various states have been invited. The object of the meeting is for scientific purposes for those engaged in this particular line of work. A most interesting and instructive program has been prepared and one which will no doubt receive the careful consideration of the authorities who will be present.

COUNTY SOCIETY

SECRETARIES, ATTENTION

The secretary is reviewing his membership list and the secretary of each component society should see to it that a complete, revised list of the members of his county society is sent at once to the secretary of the New Mexico Medical Society. On the first of April, each year, a report is made to the secretary of the American Medical Association as to the membership of each society—state and county, and this report is almost due. In connection it might be well to remind ourselves of the fact that membership in the American Medical Association depends upon membership in the state society, which membership, in turn, depends upon one's standing in the county society. It is essential, therefore, that the list as made up be correct, and to this end the secretary of the New Mexico Medical Society begs to request that the complete lists be furnished him at once.

Members in counties where no county society exists, deal directly with the secretary of the state organization, and it would be well for these to send in their names as a matter of record.

The following is a copy of a letter sent to our representatives in congress by the Chaves County Medical Society. It would not be a bad idea for other societies to send them one similar. Let them know how the medical profession feels about this matter.

"Dear Sir:—

Representing the medical profession, not only of this county and city, but we believe the profession of the entire state, we desire to acquaint you with our attitude on the Owen bill. The medical profession has ever championed the cause of health and sanitation for the masses and our interest in this measure is in keeping with this altruistic principle. We are not mercenary in this matter nor have we any feelings against anyone opposing this measure from principle; it is only the time-honored creed of doing all we can for the welfare and health of our patrons, the people. Much opposition to this measure has sprung up over the country and we desire to call your attention to the nature of their arguments, the source of this opposition and the untenable ground on which their arguments stand. The so-called "American League of Medical Freedom" is the source of all this opposition. This league would be more appropriately termed the "*League for Poisoning Innocent Women and Children.*" This league is composed of men who are personally interested in the adulteration of food and the manufacture of patent medicines. Added to these are those who decry medical education and efficiency and those who do not believe in medicine at all. You are too enlightened to necessitate

making an argument as to what the medical profession has done toward the health and happiness of the world. Diphtheria, small-pox, yellow fever and kindred diseases have ceased to terrify us as once they did. Medical science has wrought out their causes and suggested remedies for their treatment and prevention.

Hundreds of thousands of innocent children die annually of preventable diseases through ignorance of their mothers and fathers. Preventable diseases cause the expenditure of millions of dollars every year; criminal, pauper and defective classes are on the increase in our country at an alarming rate; and if it is a fact, as it is, that these conditions are amenable to scientific management and treatment, then there is adequate reason for the immediate passage of this bill, and it is a disgrace to our country that such legislation has not been enacted long ago.

If it pays to teach people how to raise fine wheat and cattle, how much more important, and what a greater return will be had from teaching them how to live in order to have the best health and escape the ravages of preventable diseases. The government willingly spends millions in an endeavor to eradicate the "fever tick" from cattle, but not one cent has she to go toward checking the ravages of cholera infantum and the long list of preventable diseases that are claiming their thousands of lives annually. This is a shame on our boasted civilization.

In certain quarters the chief argument against this bill is that it is gotten up in the interest of the regular school of medicine, claiming it to be

an effort to establish a "medical trust." Such arguments are only the vaporings of a distorted imagination and the wailings of quacks and ignorant pretenders who know themselves to be incompetent and irresponsible. What few positions there would be to be filled by the contemplated department would be filled by the very best men available irrespective of school or system of practice. Efficiency would be required, not creed or dogma. The public good demands that medical efficiency be elevated to the highest pinnacle possible, and to this end the regular profession is ever working, having no stones to cast in the pathway of any who may have the mental capacity to add one iota to medical knowledge. We gladly accept and adopt any and everything that has been proven beneficial to suffering humanity, it matters not its source.

The "states rights" argument is untenable. We do not hear any objections to the Department of Agriculture along this line. The states are quite willing that their farmers be taught scientific agriculture; then why should they object to allowing the people to be taught the science of living and enjoying health and immunity from disease?

The medical profession here, desires to know just how you will act in this matter. In arriving at a conclusion as to your support or non-support we simply ask that you investigate the source of opposition. Generally it will be those who have an ax to grind. In behalf of suffering humanity we ask that you lend your untiring energies toward a speedy passage of this bill.

We shall watch with acute interest your attitude to this, to us, most important matter that now confronts our highest law-making body.

With highest personal regards, we beg to remain,

(Signed by twelve physicians.)

The Bernalillo County Medical Society met in regular session in the rooms of the Commercial Club Albuquerque, on February 22, 1912, with the president, Dr. Frank, in the chair. Nineteen members and two visitors were in attendance.

The secretary reported that the members were becoming more prompt in the payment of their dues, the response to the call having been much more satisfactory than was the case last year at the same date.

Dr. P. G. Cornish presented a paper on "Appendicitis in Children" which was followed by a paper by Dr. Geo. O. Keck on "Twenty Cases of Pneumonia Treated by Bacterins."

The committee appointed to arrange the lecture date for the lecture to be delivered by a representative of the American Medical Association, reported that all arrangements were complete and the lecturer would be chosen from the list of names furnished by the American Medical Association.

There being no further business, the meeting adjourned.

FRANK E. TULL, Secretary.

At the regular monthly meeting of Quay County Medical Society, March 6, 1912, the following members were present: Drs. Noble, Manney, Thomson, Woodburn and Brown.

The president, Dr. F. W. Noble, in the chair.

The subject for discussion was the proposed Medical Bill and State Medical Legislation. After some general discussion on the subject it was moved, seconded and carried that an additional clause to section 3 of the bill be submitted for approval. In section 3, following the phrase, "of good moral character" insert "and all applicants shall be required to produce a satisfactory certificate of graduation from high school, collegiate institutes or academy, whose educational training and course of instruction is equal to

that required for matriculation into the University of New Mexico." The reason for this was also submitted to the chairman of the medical legislative committee. The meeting adjourned to meet first Wednesday in April.

O. E. Brown, M. D., Sec'y.

In our February issue the article on Empyema was prepared by Dr. R. L. Bradley and read at the Las Vegas meeting of the New Mexico Medical Society, September 6-9, 1911. Through an oversight, the name of the author was omitted, and we are glad to make the correction and apologize to Dr. Bradley.

Tendon Work for the General Practitioner

With Twenty-five Lantern Slide Illustrations

By Dr. W. L. Brown, El Paso, Texas

Read before the 30th Annual Session of the New Mexico Medical Society.

East Las Vegas, N. M., September 6-9, 1911.

More than at any other period of the development of the surgical science, is surgery changing and working along more conservative lines. There is no longer any *room* for the destructive surgeon, much less any *excuse*. The man who is doing destructive surgery today is doing it either because of lack of mechanical skill and experience, or because of ignorance of the work undertaken. The day has long gone by for a surgeon to take from the organism, except under most unusual conditions, and that only being organs which have already been destroyed by disease or injury.

Probably the greatest advance in recent surgical thought has been along the line of tendon and bone surgery. The transplantation of complete sections of tendons and bones with success would have been beyond the wildest imagination of the surgeon of a few years ago, but today the transplantation of tendon, fascia and bone is an established fact. Many hopelessly crippled limbs now are being restored to good, useful members because of various tendon operations, including suture, transference, reversal of function and bodily transplantation.

The same is also true of bone sur-

gery. Many limbs that would have been sacrificed even ten years ago, because of the loss of continuity of bone, are today being saved by transferring the bone from some other part of the body to bridge the gap. This line of advancement is of very great interest because it is in the everyday work of the general practitioner. In that regard it is of much more practical interest than some of the rare and difficult operations which cannot now, and never will be properly performed except in the hands of a specialist.

Credit is especially due to the orthopedic surgeons for the earlier developments along the line of tendon work. Among the pioneers may be mentioned Duplay, as early as 1876; Nicoladini, 1882; Parrish, 1892; Winkelmen and Goldthwaite, in 1894, and Eve in 1898.

Real tendon work has only been put on a firm foundation and the technique perfected since 1894, which makes it a subject of comparatively recent development. As early as 1887 tendon transplants were used, one from a dog to a man and one from a rabbit to a man, both with success, obtaining in both cases good functional results. Tendon transplanting and transferring has occasionally been used since

that time, but has not come into general use, and no great amount of study has been devoted to the subject until within the last few months. The most recent and scientific study is that of Dean Lewis and Carl B. Davis, of Chicago, reported at the meeting of the American Medical Association this year. I would suggest very strongly that any of those who are contemplating tendon transplanting should first study this article in the Journal of the American Medical Association, of August 12, 1911. This probably represents the most thorough experimental study of the subject that has taken place in recent years. Their experiments on dogs, as well as two or three on human cases, shows the absolute practicability of direct transplants of sections of tendon and fascia. However, as far as the general practitioner is concerned, before we reach the period for the study of the restoration of tendon function, we should casually review some of the factors which produce loss of tendon continuity and serviceability. In order to do this we should classify the subject briefly under the following heads:

I. Cellular Tissue Infections and Tenosynovitis.

II. Proper and Improper Immobilization During Fractures.

III. Primary Injuries and Amputations.

IV. Restoration of Tendon Function, Loss from any Cause.

I

CELLULAR TISSUE INFECTION AND TENOSYNOVITIS

There has been much damage done under this head in the past in handling these conditions without due regard to the future tendon function; in

other words, it has always been the teaching to cut wide and deep, without any caution being given to the future serviceability of the member. For this reason many an otherwise functioning tendon has been rendered useless by improper incisions in this condition. These incisions should always be made with due regard to the surrounding structures, and especially the tendons and tendon sheaths. A study of the location of the tendon sheaths in the palm of the hand and fingers will very greatly assist in finding the proper location at which to make this incision to do the least possible damage. In addition they should never be made recklessly, but should be made cautiously, under careful inspection of the structures as they are approached, in that way doing just what is necessary and no more. The first picture which we show today will demonstrate this point very clearly.

II.

PROPER AND IMPROPER IMMOBILIZATION DURING FRACTURES

Under this head, the great tendency has always been, in the treatment of fractures, to leave the parts immobilized too long, thereby, in many cases, setting up serious pathology in the tendon sheath, causing adhesions and stiffening which in many cases, especially older subjects, it is difficult to overcome in the future. The period of convalescence in Pott's fracture has many times been greatly prolonged because the foot was not dressed at the time so as to prevent the tendo Achilles from contracting. Many times in Colles's fracture the flexor and extensor tendons have been months recover-

ing because of a too long and too continuous immobilization. The latter fractures should always be dressed so that pressure from the splints will not be too great, especially over the flexor tendons, and the splints should be short enough that passive motion may be begun in the fingers after the first two or three days.

III.

PRIMARY INJURIES AND AMPUTATIONS

Under this head, it is important to see that all tendons, in wounds of whatever nature, are properly sutured and a new sheath properly constructed at the time of primary dressing of the wound. If this is not possible, because of unfavorable surroundings or lack of proper material, the wound should be dressed only temporarily until such time as the tendons can be properly cared for. In primary amputations the tendons, both flexor and extensor, should either be sutured together over the stump, or each sutured into the periosteum of its respective side of the bone. There is certainly no advantage, and even a very great disadvantage to a laboring man, to have the stump of a finger saved (and the more the worse) if he has no tendon control of the same. We have all seen these cases, where it would be a positive advantage to a mechanic to have the balance of the stump amputated and get it out of his way. In addition to this, we are never justified in giving half of the tendon function which we might otherwise intelligently double. In other words, while there are two sets of flexor tendons going to the fingers, there is no reason why the strength in the stump should not be equal to

that primarily in the finger, if both sets of tendons are properly sutured.

It is not necessary to undertake to remember that in certain amputations the tendons should be sutured over the stump and in others not, because, with only one or two exceptions, there never can be any mistake by suturing all the tendons severed at the time of the operation, especially in small amputations.

IV

RESTORATION OF TENDON FUNCTION, LOSS FROM ANY CAUSE

Under this head we open up a field that is only just beginning to be explored, and under which we have much food for thought and study and experimental observation. It is just here that there has very recently been the greatest amount of progress and experimentation. Every case coming under this head will be found to be a rule to itself. Each case separately will be a study, as to what will be the best procedure to adopt. If there is loss of continuity, whether to transfer this to the neighboring tendon of like function, whether to reverse the function of the opposite tendon, or whether to transplant bodily fascia or tendon from another part of the body, from another person, or from an animal to fill in the gap, will have to be decided in the individual case.

Under this heading it is only possible to present a few of the principles underlying the work, so that the individual may use of these as he finds necessary in the particular case. Among these we may summarize as follows:

1ST: Limbs should not be too long or too continuously immobilized in fractures, because of the danger to the future tendon function.

2ND: Great caution should be used for cellular tissue infections, to see that the tendon sheaths are not unnecessarily opened or the tendons severed by making reckless insisions without due regard to these structures. The permanent disability of many of these hands has been due as much to improper incising of the abscess as to the infection.

3RD: All recent wounds of tendons should be immediately repaired, and if surroundings are not such as to justify this procedure, they should only be temporarily dressed until such time as the tendons may be properly repaired. In the repair of every tendon, from either recent or old injury, the field should be rendered absolutely bloodless, and a careful dissection be made. In the repair of every tendon, whether recent or old injury, a new sheath should be provided in place of that destroyed, that the future function of the repaired tendon may not be reduced because of adhesions.

4TH: The most practical method for constructing a new sheath is to use subcutaneous areola tissue, Cargyle membrane, sections of veins, etc., have been used, but not with satisfactory results.

5TH: In operating to restore function to tendons that have had old injuries or infection, all scar tissue should be carefully dissected away.

6TH: After all tendon repairs complete immobilization should be sustained for three weeks, then passive motion begun cautiously. Tendons have almost no blood supply, and consequently heal slowly.

7TH: Immobilization should be in the position which will give the tendon greatest relaxation.

8TH: In amputations at the wrist or ankle joints, or through the leg or forearm, in the presence of infection, all the larger tendon sheaths should be split open, the tendons pulled down and cut as high as possible, the larger tendon sheaths drained through separate incisions, after they have been thoroughly swabbed out with tincture of iodine.

404 Roberts Banner Building.

Thyroid and Parathyroid

Dr. L. G. Hust, Albuquerque, N. M.

Read Before the Bernalillo County, New Mexico Medical Society, Jan. 17th.

Mr. President and Gentlemen of the Bernalillo County Medical Society:

Owing to the small experience in the diseases of the Thyroid and Parathyroid glands, and until recently which we knew so little of, I will state that I can offer nothing original and hence my paper will be principally book.

From the subject this evening, Thyroid and Parathyroid, from experience and after investigation I cannot see their relation except anatomically and, therefore, will treat them separately.

ANATOMY.—The Thyroid glandular organs are classed under the head of ductless glands, since, when fully developed, it has no excretory duct. It is situated at the upper part of trachea and consists of two lateral lobes placed one on each side of that tube and connected by a narrow transverse portion called the isthmus. The anterior surface is convex and covered by the sterno-hyoid, sterno-thyroid, and omo-hyoid muscles. Its lateral surfaces are also convex and lie next to the sheath of the common carotid artery. Its posterior surface is convex and embraces the trachea and larynx.

The isthmus connects the lower third of the two lateral lobes and measures $\frac{1}{2}$ inch in breadth. A third lobe, conical in shape, called the pyra-

mid, sometimes arises from the upper part of the isthmus, or from the adjacent portion of either lobe, but most commonly the left..

The thyroid body is invested in a thin capsule of connective tissue which projects into the substance and imperfectly divides it into lobules of irregular form and size. It is of brownish-red color, when cut and is made up of a number of closed vesicles containing a yellow glairy fluid and separated by intermediate connective tissue. The gland is supplied by the superior and inferior thyroid arteries and sometimes an additional branch from the innominate, or the arch of the aorta. The arteries and veins are remarkable for their large size and frequent anastomosis. The lymphatics are very numerous and of large size and terminate in the thoracic and right lymphatic ducts. The nerves are derived from the middle and inferior cervical ganglia of the sympathetic.

ETIOLOGY. Exceedingly rare before puberty and after menopause, and affects females five or six times as frequently as males, a neuropathic heredity is commonly encountered. Emotional and mental shocks especially profound and protracted anxiety and grief. Pregnancy seems to excite the disease. After delivery there seems to be improvement. Graves' disease

is often associated with other neuroses such as chorea, hysteria, and epilepsy. A family type is often met with, a family trait or a weak tendency.

Johnson says it is the over activity of the thyroid gland which produces and explains exophthalmic goitre. Gley says that exophthalmic goitre is produced by deficient thyroid activity, which is probably right.

PATHOLOGY.—The function of the thyroid gland is to furnish an internal secretion which is not only important, but indispensable, for the building and maintenance of the organism, a lack of which material leads to nutritional disturbances (myxoedema or cachexia) and its over production to nervous phenomena (exophthalmic goitre). Therefore, in the study of this organ we are most interested in the conditions which give rise to a diminution, an increase, or a perversion of this important function.

A new field of study was offered in the experimental problems that suggested themselves in connection with thyroid function, which was opened by the discovery of Kocher and of Reverdin, that extirpation of the thyroid was followed by cachexia. At first these experiments were complicated by a lack of knowledge of the parathyroid glands, but that subject has now been made clear by a more exact study of the latter organs.

Then came the observations of the efficiency of mouth administered thyroid extracts as a substitute for the gland itself and then the discovery that the thyroid possessed a marked power of regeneration when transplanted; sufficient, indeed to act promptly for a removed or diseased organ.

Our knowledge of hyperthyroidism

has been increased by the ability to study glands removed at various stages of Graves' Disease, but the complicated pneumonia that occur in connection with the reaction of thyroid diseases on the organism as a whole offer a rich field for investigation that may well lead us into a consideration not only of cretinism and exophthalmic goitre, but also of such conditions as certain neuroses, psychoses and dermatoses, rickets, and osteomalveia, obesity and allied conditions.

SYMPTOMS AND DIAGNOSIS

The diagnosis of goitre in itself is exceedingly simple because of the definite location of the thyroid gland and its attachment to the trachea which causes it to move upwards with the larynx during the act of swallowing.

With enlarged thyroid, exophthalmus and tachycardia or either two of these symptoms would diagnose exophthalmic goitre, together with tremor, muscular weakness, nervous excitability, mental deficiency, vertigo and paroxysmal dyspnoea, would make it absolutely certain.

PROGNOSIS

In simple goitre more than one half of all cases will recover under careful dietetic, hygienic, and medicinal treatment, and one half of the remaining cases will recover if the injection method is carried out.

In exophthalmic goitre there can be no doubt but what the prognosis in this disease has improved enormously during the past few years, and that this improvement is due largely to the recognition by Moebius of the fact that the disease is due to the circulation in the blood of toxic material secreted by the thyroid gland under certain conditions. Founded upon this

theory the improvement in prognosis is due to the recognition of the fact that the cause of this introduction of toxic material into the circulation can be stopped by the removal of the diseased gland.

That this can be done safely, in over 95% of all cases has been thoroughly demonstrated. It seems likely that the prognosis in this disease will be still further improved in the future, because a diagnosis will be made earlier and proper treatment instituted before the heart muscle has been seriously injured.

TREATMENT

Fifty per cent. of the cases of simple goitre that present themselves to the general practitioner can be cured, as I stated above, without surgical interference, but a much smaller per cent is given by the surgeon for the reason that nearly all the cases who apply to them for relief have exhausted medical skill. Under careful dietetic, hygienic, and medical treatment, which must consist of drinking abundance of good water, by carefully regulated diet, proper ventilation of homes, especially sleeping rooms, abundance of sleep and no excitement and complete mental and physical rest, most cases get well.

In simple goitre an absorbable iodine ointment is beneficial. Three to five grains of a reliable thyroid extract has a specific value. Most of these preparations are inert. Cases that do not yield upon this treatment should be injected directly into the substance of the gland, ninety drops of a 5% aqueous solution of pure carbolic acid. This solution should be prepared with hot water. The patient should be made to swallow after the needle is inserted to

be sure that it is in the gland substance. This treatment is to be repeated once a week. By this method the patient should be much improved in five or ten treatments. After giving the above with general tonics and you get no relief, the patient should be referred to the surgeon. The X-Ray and electricity have been tried without much benefit.

The above refers to the treatment of ophthalmic goitre, also, and if not relieved after a long and faithful trial, should be referred to the surgeon.

I will not go into the surgery of the thyroid for the reason that you are familiar with same and would be infringing on your good nature to discuss that part of the subject.

THE PARATHYROID GLAND

Normally the parathyroid glands are four in number and are situated on the posterior surface of the lateral lobes of the thyroid, two on either side, one above and behind the other. They are about the size of a pea and of very irregular shape. The parathyroid gland is supplied by the parathyroid artery which is a branch of the inferior thyroid.

Kohn was first to establish the independence of the parathyroid from the thyroid. They have no duct.

The complete removal of the parathyroid leads to death with severe symptoms of tetany, which is in no way associated with, or dependent on the thyroid glands as once thought.

By gradual complete destruction, severe nutritional disturbances are brought about, ending in death and apathy without symptoms of tetany. Parathyroid therapy is one, if not the most interesting and important before the profession today.

PANCREATITIS

W. G. Hope, M. D., Albuquerque, N. M.

Read before the Bernalillo County, New Mexico Medical Society, November 15, 1911.

It has been only in the last few years that the frequency and clinical importance of this disease has come to be recognized.

The inflammation may affect the ducts chiefly, or the substance of the gland. The first is called catarrhal; the latter parenchymatous inflammation. The latter is the more frequent, and the most important.

CATARRHAL PANCREATITIS

—Catarrhal inflammation of the ducts of the pancreas is caused by infection spreading upward along the canal of Wirsung from a focus within the duodenum within the ampulla of Vater or in the lower part of the common bile duct. "If a gall stone is impacted in the lower part of the bile duct, an infection spreads both upward and downward from it; as it descends it reaches the ampulla then extends along the pancreatic duct. If the stone is embedded in the ampulla, the infected bile, descending the common duct, may be retrojected along the canal of the wirsung, and a catarrhal or an acute hæmorrhagic inflammation may be aroused." (Moynihan.)

The infection which causes the onset of the catarrh may be spread from the duodenum. An ulcer of the duodenum, although seldom recognized,

this disease is likely a frequent concurrent infection of the common bile duct. The impaction of a stone in the common duct is of frequent occurrence, and when the anatomic conditions are studied, the extreme probability of the infection of the pancreas is realized.

The catarrh is relieved by the removal of the infecting agent in the majority of cases, but not in all. In many chronic inflammations of the pancreas there remains a very serious condition. "In some cases catarrh of the ducts go on to suppurative Cholangitis. In either case the onset of suppuration is a very serious matter, and in the majority of cases proves fatal." (Anders.)

PARENCHYMATOUS PANCREATITIS; ACUTE HAEMORRHAGE

As to the nature of the relation of the hæmorrhage and inflammation of the pancreas, authorities differ. The whole subject is in need of further investigation. Mayo Robson says, relative to Pancreatic Apoplexy: "The ultra acute cases with violent and sudden onset accompanied by collapse and ending fatally with extreme rapidity, being chiefly those where the hæmorrhage precedes the inflammation; while

the less, though still acute cases, where the onset is more gradual, where the symptoms are not ushered in by collapse, and where resolution and relapse are liable to occur being those in which inflammation precedes the hæmorrhage."

SYMPTOMS. A patient is suddenly siezed with intolerable severe pain in upper abdomen. The agony may be so intense that fainting occurs, generally followed by vomiting. Pulse rapid and weak. Respirations shallow and quick. The character of the symptoms are such that perforation of the stomach, doudenum, or appendix may be suspected. The abdomen as a rule is not rigid, nor is it tender, except on *deep* pressure in the epigastrium. At first there is no distention, but in twelve to twenty-four hours, a distinct fullness in the epigastrium, and later a general abdominal distention may develop. Usually vomiting is intense, persistent, uncontrollable. High intestinal obstruction may be suspected.

The vomitus consists first of contents of stomach, then altered blood—"black vomit." The temperature generally is above normal and varies greatly.

In some cases there is jaundice, usually slight. The chief diagnostic symptoms are the sudden onset, and rapid development of peritonitis in upper abdomen. The downward trend of the patient is rapid, death may occur in from twenty-four hours to five or six days.

TREATMENT. "Acute Pancreatitis is fatal in the great majority of cases, unless surgical treatment is

adopted early." Moynihan. The less acute cases may live until an abscess is formed; or until a dead part of the gland is cast off in a slough.

What are the surgical indications? The pancreas and its surroundings form a phlegmon and relief can be given only by free drainage of inflammatory products. In many cases gall stones in the duct, ampulla, or gall bladder are present and these should be removed and the gall bladder drained.

SUB-ACUTE PANCREATITIS. The abscess may be evacuated through the anterior abdominal wall. This usually meets the whole indication.

CHRONIC PANCREATITIS

SYMPTOMS—Cause in the great majority of cases a stone in the common bile duct. However, the symptoms are much the same as symptoms of gall stone. Added may be large, bulky stools of a whitish color, steady jaundice. The only way to differentiate between malignant disease of liver or pancreas is in the application of the Cammidge reaction in the urine.

"In malignant disease the jaundice is deeper and greener; in chronic pancreatitis it is never so deep and inclines to pale golden yellow." (Moynihan.)

TREATMENT. The treatment of chronic pancreatis is practically the same as in the acute case. Drain gall bladder, remove stones, and if the organ be not too chronically and too badly diseased, the inflammation will subside. According to Mayo Robson there are recorded 113 cases of operation for chronic pancreatitis with 8 deaths.

Diagnosis of Malignant Disease

(With special reference to the Methylene-blue test.)

Read before the 30th Annual Session of the New Mexico Medical Society,
East Las Vegas, N. M., September 6-9, 1911.

F. De la Vergne, M. D. Albuquerque, N. M.

In view of the advancement in surgery made during the past decade, bringing vastly lowered mortality and perfected technique, the possibilities offered by operative procedure for the relief and cure of malignant diseases are such that the necessities imposed upon the general practitioner for accurate diagnosis of such conditions have increased a hundredfold.

It is rare, indeed, that a case of "slight indisposition" with a group of indefinite symptoms applies primarily to the surgeon for relief. The lay mind associates the surgeon with the knife only, and seeing at the moment no necessity for that, naturally turns toward the so-called "medical" practitioner, expecting speedy and permanent relief in his prescriptions and assurance that "the trouble is purely functional and will adjust itself in time."

The law holds a general practitioner responsible for but ordinary skill in diagnosis and treatment of disease though requiring him to employ all recognized means toward accuracy in both. Diagnostic means have increased so greatly, both numerically and in recognized value, and have been placed so liberally at the disposal of the profession at large, that we may yet see

the time when failure on the part of its members to correctly diagnose malignant disease in its early stage will, morally, at least, constitute malpractice just as would failure to recognize subluxation of a joint resulting in permanent loss of function.

Some of the greatest efforts of modern research are being directed toward unveiling the mysteries at present surrounding the ætiology and treatment of cancer. Men of the highest type of scientific attainment are concentrating their entire physical and intellectual energies toward the solution of these problems, backed by the financial advantages of vast fortunes so placed at their disposal that no want of material assistance may constitute an obstruction to a successful issue.

The world has a right, therefore, to hope that as a result of this great work it may some day develop that all this time we have been dealing with a preventable disease, and that, as in the history of the research directed toward small pox, malaria, yellow fever, pellagra, uncinariasis, bubonic plague and kindred infections.. Prophylaxis alone may eventually banish forever this hideous affliction, but, as the Christian Scientist naively observes "until we reach that particular stage of

development" our only hope of successfully overcoming cancerous infection, must lie in early diagnosis, followed by the prompt application of perfected surgical technique.

In the vast majority of cases in which there is no actually palpable evidence of malignant disease, other organic lesions being excluded, the busy practitioner presupposes a purely functional disorder and carelessly applies therapeutic measures over a period of time during which he neglects to keep the subject under proper observation. When one remedy fails to give the desired result another is tried, and so on, until the case, through dissatisfaction passes quietly from his hands and fades from his memory. The subject goes from one to another until at last one is consulted who realizes the curious fact that none other of his predecessors on the case accomplished anything through medicinal means, and that fact alone—not diagnostic means—awakens him to the possibility of the existence of some hidden organic disease. Thereafter, by some well directed and intelligent efforts along lines of special investigation he is enabled to prove the existence of—let us say cancer—or at least to lay the foundation for reasonable suspicion. At this point the physician invokes the aid of the surgeon, who, he instinctively feels, is by reason of his closer relation and practical experience with organic disease, the one to whom must be relegated the destiny of his client.

In such cases, the surgeon, recognizing the close relation of history and symptoms presented demands the only reasonable thing left to be done—exploration. As a result he finds with

regrettable frequency that the time for beneficial operative procedure has passed, but that had the symptoms been recognized earlier there would have been a possibility of a reasonable amount of success therein. The present attitude of the lay mind regarding surgery indicates a far keener appreciation of its perfection, and a much closer knowledge of its end results, than we have placed to its credit.

Ten individuals go in quiet and confidence to the operating room today where a decade ago it was difficult to induce one. In fact the average man today appeals to the surgeon for operation—often believing him capable of an ability to accomplish results far beyond his actual limitations.

Therefore, in these days, the general practitioner will encounter less difficulty in inducing the patient to submit to exploratory operation, at least, not for the purpose of confirming a diagnosis, but for making one.

It is manifestly incumbent, therefore, upon the general practitioner to so perfect his knowledge upon the subject that he may have at hand the proper means of investigating more carefully those groups of symptoms so obscure at the outset as to render prompt diagnosis impossible, and the employment of tests of a certain recognized value should be routine practice by every conscientious physician.

Pressure of business, lack of appropriate reagents, necessary apparatus, or other excuses singularly devoid of reasonable basis, will fail to absolve us from what is clearly our sacred professional obligation toward the client, who, in all confidence, seeks the benefit of our professional skill.

Diagnosis of the "snap" order no

longer find justification in the light of present day knowledge and the tendency of a man to deliver opinions of this sort brands him as either incompetent or foolish—adjectives which would hardly be acceptable to the average man for personal application.

It is not the purpose of this paper to take up your valuable time with the presentation of the long array of classical symptoms of cancer, drawn from the many and invaluable text-books, but to call attention to the more recent literature—its value as a study at least, and to the necessity for us all to be more appreciative of the efforts which are constantly being centered upon this subject, and by our individual labor, whenever possible, assist in bringing out some definite conclusion for or against certain theories or practical methods.

For the purpose of this paper malignant disease may be classified as occurring in palpable and non-palpable locations. Of those conditions, in the first group every man is familiar with such as the rodent ulcer of the face, glioma of the eye, the osteosarcomata of the cranial and mandibular structures, cancer of the tongue, and downward to the sarcomata of the bones, involving joints, tumors of the musculature and connective tissues, with the involvement of contiguous glandular systems. All of these conditions are promptly recognized by the general practitioner who makes a correct diagnosis, based upon the line of reasoning which includes consideration of age, history, presence or absence of pain, pressure symptoms, rapidity of growth, and effect upon the general health of the patient. The greatest

source of error is probably in estimating the character of tumors of the mammary gland.

In this group we have clear lines of objective symptoms, by palpation, inspection, mensuration, aspiration, we may note the consistence, rate of enlargement and follow the changes manifested from day to day. It is even possible to remove small portions of such growths and read a diagnosis therein under the microscope. Here diagnosis is comparatively easy by the above-named methods, and recourse to other tests may not be necessary.

In the second group are the malignant conditions occurring out of sight—out of touch—and manifested only by groups of symptoms which are so insidious in their onset as to pass unrecognized unless subjected, on general principles, to some routine investigation.

Be it sufficient to say that all the contents of the thoracic and abdominal cavities, with the exception of the heart, are subject to malignant degeneration which frequently never reach a palpable condition, the only symptoms being subjective.

It is probable, however, that while the groups of symptoms are varied and certain cardinal symptoms may be entirely absent during the entire course of the disease, the one constant symptom if recognized as such is undoubtedly *modification of function*—and such a condition whenever encountered should always arouse suspicion. In most cases it is also the *earliest* subjective sign.

Malignant disease of the digestive tract, including the gall bladder and pancreas present the greatest difficulty

in the way of accurate diagnosis. It so very frequently happens that the only evidence of an advanced malignant obstruction of the pylorus will go on to fatal termination with no symptoms except enemicachexia, and regurgitation of food, pain being distinctly absent. Cancer of the stomach may effect every part of the organ. In the vast majority of cases it is found involving the pylorus, or not far from it, and may continue for a considerable period of time before giving rise to any symptoms except those of dyspepsia.

Moynihan says that the symptoms in the two forms of growth, pyloric and pre-pyloric, should make their recognition before operation a matter of little, or no, difficulty. In the pyloric form the symptoms being of obstructive character with stasis of food and inability to take solids, also vomiting in quantity, which increase with the increasing capacity of the stomach; whereas in the pre-pyloric form the symptoms are not obstructive in the earliest stage, and only when the pylorus is invaded is there any impediment of the onward passage of food.

Otto, a Scandinavian investigator, makes note of a significant fact—namely, that the severity of symptoms in cancer of the stomach vary according to the location of the affected part. He furthermore remarks that people seldom die from cancer as cancer, but that they succumb to perforation, hemorrhage or functional disturbance earlier or later, after the onset of symptoms, according to the location of the trouble. This explains, a fact which we have all from time to time found difficulty in explaining, namely,

why do some cases of cancer of the stomach run a short course, of a few months only, while others may exist for a matter of a year or more before death.

The early fatal outcome of cancer of the pancreas is probably due to the mechanical functional disturbances in that region. We may, therefore, be guided in a measure by the rapidity of the development of severe functional disturbance in making a diagnosis as to the location of the suspected disease. A history dating back through a long period of time pointing to a possibility of gastric or duodenal ulcer will frequently give us a clue as to the liability to a cancerous degeneration in the old scar tissue is now recognized by surgeons.

Another important point not to be overlooked, is the consideration of metastatic distribution of the infection evidenced by enlargement of glands in the immediate vicinity. A French observer reports a case of a woman who applied for relief for pains in the stomach three months previously while apparently in perfect health. The pain appeared with symptoms of indigestion was relieved by vomiting, but she was losing constantly in weight. Pain came on after meals. In this case the umbilicus was found slightly protruding with a hard stem-like tumor extending backward to a primary cancer at the pylorus.

While not particularly applicable to the diagnosis of gastric cancer, it has been noticed that varicose veins over the abdomen may indicate a similar condition, affecting the stomach and duodenum with a possibility of such a condition giving rise to ulceration with

subsequent malignant disease.

One might go on indefinitely bringing out physical signs indicative of malignant disease but those to which this paper particularly refers are those indications which may be by the various analysis of the body fluid. Lavage of the stomach with microscopic analysis thereof, previous to the ingestion of food, is of value in determining the presence or absence of free hydrochloric acid. Lavage of the stomach after the test meal for examination of the contents should never be neglected. The presence or absence of pepsin in the urine has been found by Scholz to have been of great value in dubious cases of gastric cancer. Strong presumptive corroborative evidence is afforded by the discovery of pepsin in the urine when the gastric juice, after the test breakfast, is free from pepsin.

Elsberg has published the results of his hemolytic skin reaction in carcinoma which consists in injecting five minims of a 20 per cent solution of washed normal red corpuscles into the subcutaneous tissue of the forearm of the patient. The results, however, were far from satisfactory as a diagnostic aid.

The sero diagnosis has not proven to be of practical importance as the reactions obtained thereby may frequently be induced by other conditions.

Newbauer and Fischer in experimenting with the peptic splitting ferment in the stomach show that it is liable to error. Lyle and Korber have made use of this test in a number of cases and found it very valuable. In

eleven cases operated upon it never failed when present to show the presence of cancer, and when absent the case turned out to be cancer elsewhere, or cholecystitis falsely diagnosed as gastric cancer. This is known as the Tryptophan test.

It has been conservatively estimated that 80 per cent of tumors or lawless growths, are malignant, the remaining 20 per cent being characterized as benign, although it is admitted that even tumors of this nature may subsequently undergo malignant degeneration. It is therefore possible that an examination of a portion of a presumably benign growth might not give an accurate diagnosis, even under the microscope, as the section may have been obtained from the non-malignant portion.

From the foregoing, although not of course in detail, it is plain to be seen that the general practitioner must have recourse to some of these methods of diagnosis in malignant disease, although they may be attended with some difficulty. The ideal test would be one which could be made from one of the body fluids which could be obtained with a minimum of inconvenience to the patient, such, for instance, as the urine.

The recent experience published by Fuhs and Lintz gives in detail the results obtained by them in the employment of the Methylene-blue test for malignant disease. As the result of personal experience of the writer with this test a conclusion is reached that if properly conducted, it is of value.

Hookworm Disease

J. W. Colbert, M. D., Albuquerque, N. M.

Read Before the 30th Annual Session of the New Mexico Medical Society,
East Las Vegas, N. M., September 6, 9, 1911.

Thirty-five hundred years ago there was written in Egypt, at Thebes, a medical book—the Papyrus, recently translated into the German by Prof. Ebers—which mentions and describes Hookworm Disease. It is one of the most ancient diseases known to man, and yet there are many, even of the generally well-informed, who labor under the impression that it is comparatively a new disease, and within the past year, I have read at least a dozen articles from the lay press, proclaiming a man in the government service today, as the discoverer of the hookworm. In 1648 Pisco, described clinically the disease in Brazil, and Chevalier in Santo Domingo in 1752—but it remained for the Italian physician, Angelo Dubini, to first describe the worm; this was not until 1843. It was the ravages of the little worm amongst the laborers that drove the St. Gothard tunnel through the Alps, in 1879-80, that first caused its role as an agent of disease to become known to modern medical history, and its importance as a pathogenic agent to be properly appreciated, and today the disease is recognized in all the tropical and practically all the subtropical world, and is considered by many to be the greatest enemy of the human race in the tropics—greater even than yellow fever,

the plague or the cholera. In the past few years the disease has been found in the more temperate regions, and quite a few cases have been reported from as far north as New York.

Major Bailey K. Ashford, working in Porto Rico, in 1899, was the first to call our attention to its endemic presence of American soil, and his discovery resulted in bringing the people of the United States to a realization that the so-called “laziness of the poor whites of the south had a definite pathologic basis, and the infirmity which had passed for malaria for more than a hundred years was found to be due to the hookworm. No spot on the globe was so severely infected as Porto Rico, and in 1904 a systematic campaign of eradication began upon the little island, and in the last seven years over three hundred thousand people, or one-third of the total population of the island have been given specific treatment for the hookworm—and this has been accomplished without the assistance of a Rockefeller. Though poor, this little island has paid out her money to redeem her laboring class, setting an example that might today be followed by the Southern States, and the Rockefeller Commission, with profit.

In 1902 Dr. Stiles, Zoologist of the

U. S. Public Health and Marine Hospital service, examining specimens sent by Major Ashford from Porto Rico, and others afterward found in the Southland, discovered that zoologically the parasites belonged to a new species, which he named *Uncinaria Americana*, to distinguish it from the Old-World species—and this little worm came into the limelight through the American press—both lay and medical—when Dr. Stiles showed that the little parasite was crippling our Southland, just as Major Ashford had shown it to be the industrial curse of Porto Rico.

Soon after Dr. Stiles' demonstration in the South, Dr. Herbert Gunn, of San Francisco, found the worm in California, where it had been imported by Porto Rican laborers. During the past few years the infection has spread rapidly in California, especially amongst the workers in her mines, until it is estimated that there are upwards of fifty thousand cases in the state today.

In 1905, Dr. R. E. McBride, of Las Cruces, reported two cases, which so far as I am able to learn, are the first cases reported from New Mexico or the Southwest. One case occurred in Dr. McBride's own practice in 1904, and the other case was seen by Dr. J. L. Burnham of Las Cruces, in 1903.

• Hookworm disease does not exist to any appreciable extent in the Southwest today, and from its nature may never gain much of a foothold here. Many imported cases occur, however, and it is desirable that the physicians of the Southwest know the disease, so that such cases may be recognized, for these imported cases are apt to

give rise, at proper seasons of the year, to an indigenous infection. Hookworm disease is easily imported, and all races are susceptible to the disease. In fact it is almost impossible to keep from importing it.

There is one way in which the disease may become quite prevalent in the Southwest. This section is destined to become a mining country, and in mines conditions usually exist that are favorable to the propagation of the hookworm. Wherever such favorable conditions are found, it is simply a matter of introduction, and the hookworm will thrive. In the Southwest we already have this introduction from Mexico. There are many endemic foci of hookworm disease in Mexico, and our Mexican railroad laborers are bringing the disease across the border and carrying it along the lines of the railroads in California, Arizona, New Mexico, Colorado and Kansas, and the percentage of this introduction has been greatly increased since the close of the late Mexican insurrection, and I do not believe that I overestimate it when I say that 20 to 25% of these men harbor the parasite. About two thousand Mexican laborers were received by the Holmes Supply Company at Isleta last month, for work on the Santa Fe west of Albuquerque as far as the coast. Four or five hundred of these men doubtless carried hookworms with them. The Hanlan Supply Company received possibly an equal number of men for distribution along the main line of the Santa Fe in New Mexico, east of Albuquerque, and through Colorado and Kansas. Every person harboring the parasite

may be a focus of infection to others, for if he defecates upon the soil, where others may tread barefooted, he supplies the medium for further infection, providing the proper degree of temperature and shade be present.

Dr. Keck, of the Government Indian School at Albuquerque, recently consulted me regarding one of his school boys, who later proved to have a well-defined case of hookworm infection. This young man worked in the beet fields of Colorado last summer where conditions in the summer would be ideal for the spread of the infection. A number of the boys from the various Government Indian schools spent this summer in the beet fields, and it would not surprise me to find quite a few of them harboring the parasite.

Early last month I found in Albuquerque, an entire Mexican family, consisting of father, mother, two daughters and one son, all heavily infected with hookworm. This family had resided in Albuquerque for eight months.

During the past year I have treated fifty-two cases of hookworm disease amongst Mexican railroad employes, coming from points in Arizona and New Mexico, while during the previous three years I only saw eighteen cases. Convinced that importation of this disease was increasing rapidly, I took up the question of prophylaxis with the chief surgeon of the Santa Fe Coast Lines, and today this line is handling the problem intelligently, and vigorously. All cases are promptly deported as soon as diagnosed, and proper instructions relative to sanitary measures to prevent the spread-

ing of the disease have been sent out, in bulletin form, to all officials of the track department. But so far as I know, the Santa Fe Coast Lines is the only railroad in the Southwest which is giving any attention to this matter, and certainly, in this day of preventive medicine, such precautionary measures should be insisted upon.

I do not believe, however, that there is much danger of the disease spreading in the Southwest to any great extent, unless it is during the hot, wet season, for practically all the cases seen here are recently imported into a climate where neither occupation, improved habits nor temperature will favor a spreading of the infection. This is nevertheless a subject that every practitioner in the Southwest should be familiar with, at least from a working standpoint, and it is a lamentable fact that, in spite of the amount of literature, both lay and medical, published during the past few years on this subject, but few physicians outside of our Southern states are today acquainted with the disease.

Briefly, I desire to bring before this Association a few of the salient features of the disease, and trust that with the aid of this chart, which has just been issued by Public Health and Marine Hospital Service, I may be able to give you a clear picture of the disease.

Hookworm disease is a specific infectious disease due to infection by the *uncinaria duodenalis*, or *uncinaria americana*, and *ankylostoma duodenale*, and is characterized by a progressive anemia, general reduction in strength, various nervous and gastric

disturbances, and in severe cases hypertrophy of the heart, with hemic murmurs; anasarca, and often marked ascites.

The parasite has been so well described by Dr. Stiles, as to require only a passing reference in this paper. The American species, as found in Porto Rico and the Southern States, differs somewhat from the Old-World parasite as seen in the cases from Mexico. The chief difference lies in the nature of the buccal armature, and also in the size of the ova. The Old-World parasite has a heavily-armed mouth bearing two pairs of ventral teeth, and one pair of dorsal teeth, while the American variety, instead of two pairs of ventral teeth, has a pair of ventral semi-luna plates or lips, and a pair of dorsal plates. The ova of the American parasite is slightly larger than the Old-World specimen. The worm is seen in the feces and is about half an inch long, resembling a bit of white thread. It lives in the upper part of the small intestines, being fastened between the folds of the mucous membrane by its head; the oral capsule, like a cupping glass, draws a piece of mucous membrane into its cavity and fixes it with its teeth. Stiles, and others, have considered the parasite a blood-sucker, but our investigations in Porto Rico proved this assertion erroneous. A toxin is produced by the parasite, and this toxin is the true cause of the anemia, headache, dizziness and gastric symptoms. The average case of hookworm infection seen in this country, will harbor about 250 or 300 female worms, and this number of worms will produce about one million ova every

twenty-four hours. These ova are deposited high in the intestinal canal, and so become evenly mixed with the fecal mass. The ovum cannot develop to maturity in the intestines, but when the feces are deposited on the earth in a shady, moist place, and exposed to a relatively high temperature 180 degrees to 90 degrees F.) the ova hatch out in twenty-four hours. Each ovum produces a single larva only, and this, it is to be remembered, never takes place within the host, but outside, which explains why the increase of adult worms in any particular case is impossible without reinfection from without. This explains why we do not expect the disease to spread beyond a limited extent when brought into the Southwest from Mexico. Owing to the change in the sanitary life of the newly arrived Mexican laborer, further infection is only a very rare incident. It also explains why many of the cases gradually get better, even though their disease is not diagnosed or specifically treated. Multiple infections are cut off, and the parasites brought into this country die as they reach the limit of their natural existence.

The investigations in Porto Rico proved beyond a doubt that there is but one mode of infection with the hookworm, and that is through penetration of the skin by the larvæ. All other modes of infection are mere accidents, and are too rare to be considered. The disease is primarily a filth disease. The only way of infecting the soil is by emptying the bowels where the eggs in the feces will later develop. After the ova has been exposed to a relatively high temperature

for twenty-four hours it is hatched, and the young worm sheds its skin twice and is then ready to infect man. It gains its entrance into the skin of the barefooted laborer, and makes its way into the lymph and blood channels, through which it is carried to the heart to reach the capillaries of the lungs. It then passes through the capillary walls into the alveolar space; from here it migrates through the bronchioles into the bronchi, and then crawls up the trachea to reach the mouth cavity, after which it is swallowed in ordinary acts of deglutition and thereby reaches its place of election in the small intestines.

The symptomatology of this disease is so varied, and as my time is limited, I wish only to mention the prominent symptoms of a typical case—such a case as we are apt to see here in the Southwest. There should be no trouble in diagnosing marked infections from the clinical symptoms alone. The pallor, a dirty yellowish or muddy color, is characteristic; the conjunctiva and mucous membrane of the mouth, and beneath the finger nails, are the best guides. The hopeless, dull, melancholy expression of countenance in the well-marked cases is both pitiable and at the same time pathognomic. The feces is rather hard to describe, but once familiar with it, the physician will have no trouble diagnosing most of his cases by it. Digestive disturbances are always present, usually pain in the epigastrium and marked increase in the appetite. Dizziness and tinnitus aurium, and general weakness are always complained of. There are apt to be pains in the chest and bones,

often palpitation and perhaps hemic murmur; stupor and lack of memory are pronounced symptoms in the majority of cases. The pulse is usually found to be rapid, weak and compressible, and pulsation of the vessels of the neck is noticable. In the light cases it is not best to rely upon clinical symptoms alone for diagnosis. The only reliable method is by microscopical examination of the feces. This is one of the simplest of microscopic techniques. A bit of feces picked up on the point of a toothpick is smeared over the slide, and a cover glass applied, and examined under a two-thirds inch objective. The ova are easily recognized. They are of an oval shape, averaging 50 microns by 40, and provided with a very thin, simply outlined shell which is divided from the grayish yolk by a zone of clear, transparent fluid.

In the treatment of hookworm disease only two drugs are worthy of mention; (1) Betanaphthol, and (2) Thymol.

I consider Betanaphthol more reliable than Thymol. Thymol is perhaps a more powerful anthelmintic, but the depressant effect of betanaphthol is not so great. I keep my patients in bed on a liquid diet the day before giving the anthelmintic, and about 3 p. m. give a one-ounce dose of magnesium sulphate, so to thoroughly empty the bowels that the anthelmintic may act upon an exposed intestinal mucous membrane. The following morning I give Betanaphthol, Grs. 15 (in capsule) at 7, and repeat the same dose an hour later, and at 11 a. m. give another ounce dose of magnesium sulphate. Thymol treatment is the

same, except that the dose is double that of Betanaphthol. About ten days after treatment I examine another specimen of feces, and if ova are still present I repeat the treatment. The average case will require from one to five treatments, though there is always marked improvement almost immediately following one treatment, whether all the worms are expelled or not.

In conclusion I wish to impress upon the members of this Association the fact that hookworm cases are being imported into the Southwest every day, chiefly from Mexico, and I would say to you, that whenever a laborer recently arrived from Mexico presents himself for treatment and your diagnosis is not clear, examine the stool for the hookworm.

ABSTRACTS

PATHOLOGY AND DIAGNOSIS OF CONSTIPATION

By Wm. M. Beach, M. D., of
Pittsburg, Pa.

Pathology of constipation is naturally considered under two general heads, namely:—

1. Stasis due to altered secretions;
2. Stasis due to mechanical obstruction.

The first may be the result of neurones, and acute fermentative indigestion, or a bacillary infection. The anerobes may attack the contents of the bowel or the gut wall itself, leading to varying degrees of inflammation in the colon,—as ulceration, hypertrophic and atrophic catarrh. The colon impaired functionally or traumatically leads to stasis and consecutive inhibition of the fecal excursion. Such impairment further disturbs the physiologic lines of defence against the auto-intoxications,—as

- (a) the intestinal mucosa, itself;
- (b) the liver, and
- (c) the antitoxic glands.

Collateral with these phenomena in constipation, are such factors as cholelithiasis, hypochlorhydria, cholangitis and appendicitis, as altered se-

cretions incident to coprostasis.

Mechanical obstructions to be reckoned with include,—

1. Entroptosis or Glenard's disease;
2. Gastropptosis;
3. Dilatation of the colon;
4. Certain extra-mural and intra-mural sources of obstruction,—as pelvic tumors and displacements, nephroptosis, enlarged glands, intussusception, malignant disease, etc.
5. Acute angulation at the recto-sigmoid junction, hypertrophy of O'Beirne's sphincter, and stiff rectal valves;
6. Disease in the anal canal.

Diagnosis resolves itself into an analysis of the above conditions; to differentiate acute or chronic obstruction and the ordinary functional stasis which may also be accompanied by the various forms of colitis.

SEQUELAE OF CONSTIPATION. INCLUDING AUTO-INTOXICATION

By Alfred J. Zobel, M. D., of San Francisco, Cal.

In this paper the writer mentions many of these conditions which seem

to have their origin in chronic constipation with auto-intoxication. He states that experimental evidence has not as yet demonstrated that they actually do so, but close observation and clinical experience tend strongly to confirm the theory.

He writes that while all constipated individuals do not necessarily suffer from those symptoms ascribed to auto-intoxication, yet in his experience most patients with auto-toxic symptoms are constipated. This may be without their knowledge, and they often deny in good faith that they are not so; but proctoscopic examination generally proves the sigmoid and rectum to be loaded with fecal matter.

A report is given of the proctoscopic observations made on a number of cases of hypertrophic arthritis. In almost every instance the lower bowel was found filled with a fecal mass, although most of the patients positively stated that they had had an evacuation within an hour or two previous to the time of examination. Thorough colonic flushings invariably brought about relief from pain, and in time marked improvement in their general condition.

These observations are in line with the theory advanced by various authors that arthritis deformans may be due to intestinal auto-intoxication.

Mention is made of the various muscular, arthritic, and neuralgic pains caused by absorption of toxins from the bowel. These are often misunderstood, and treatment instituted for rheumatism.

Congestion, irritation, and various disturbances, both functional and organic, of the uterus, tubes and ovaries

in the female; the vesicles, urethra, and prostate in the male; and the bladder in both; may result from chronic constipation. This is due both to the proximity of these organs to the lower bowel and to their close physiological relationship.

It is noted that albuminuria may arise from intestinal stasis, and mention is made of the opinion advanced by various clinicians that a nephritis may even be caused thereby.

The role of constipation with auto-intoxication as casual factors of epilepsy, neurasthenia, and various mental conditions, as claimed by certain well known and competent observers, is stated here without comment.

The influence of these conditions on the heart, blood-vessels, and the blood; and its effects on the eye, ear, nose and throat are dilated on in this paper, and in support of these statements quotations are culled from the literature that has appeared on this subject during the past five years.

The writer further briefly mentions a few more of those conditions that are supposed to arise from chronic constipation with auto-intoxication, and concludes by agreeing with the trite observation of Boardman Reed that, "When we except the exanthems, malaria, syphilis, tuberculosis, and the diseases caused by traumatism, by metallic poisons, and by a few other toxic agents or infections from without, practically all the remaining maladies which afflict us and cut short our lives are now directly or indirectly traceable to auto-intoxication."

NON-SURGICAL TREATMENT OF CONSTIPATION

By Dwight H. Murray, M. D. of
Syracuse, N. Y.

Dr. Murray stated that chronic constipation and its results was one of the worst of the foes to a healthful human race.

He had never known any medication to cure cases of constipation. As primary causes of all cases of constipation he considered CARELESSNESS, IGNORANCE and LAZINESS to be of first importance. The whole medical profession should teach their clientele how to care for themselves and to train their children in order that constipation could be eliminated by educational and prophylactic methods.

Medicines for the use of constipated people have increased until their number is almost countless. Advertisements which extol particular cathartics exploited by this or that pharmacist, are well nigh bewildering.

He makes the claim that all cathartics finally leave those who use them worse than before. He does not entirely interdict the use of drugs, as there are cases where they must be used, but almost wholly for temporary relief. He says that a mistaken notion

exists in the minds of the laity that the feces is composed largely of debris of food. This, however, furnishes only a comparatively small portion of the fecal mass, the larger portion being deposited in the large intestine as the ash resulting from the products of metabolism.

He mentions various exercises, massage, deep breathing, climbing, rowing electricity, etc., as being helpful in the treatment and cure of these cases.

Sigmoid injections of pure olive oil, castor oil or medicinal paraffin oil were recommended as aids in the treatment.

He said that hours could be spent over the various drugs and methods in detail—after it all we would be obliged to say, that eternal vigilance as to regularity on the part of the patient must be exercised or a cure would not result.

The key note of his paper is, education and regularity as to periodicity of the first daily stool. Finally he believed that the whole profession had a profound duty to perform for mankind in an educational way for emancipating the race from this insidious foe.

(The three abstracts are from papers read before the 13th Annual Meeting of the American Proctologic Society.

BOOK REVIEW

W. B. Saunders Company have just issued a new (16th) edition of their Illustrated Catalogue which describes some forty new books and new editions published by them since the issuance of the former edition.

The books listed in this catalogue cover every subject of interest to the medical man. The descriptions and illustrations are such as to enable the reader to select easily just the book he wishes on any branch. It is really an

index to correct medical literature—an index by which the practitioner, the surgeon, and the specialist can acquaint himself with what is new in the literature of his subject.

This edition also contains an illustration and description of Saunders' new building, now being erected on Washington Square, Philadelphia's new publishing center.

Any physician wishing a copy of this handsome catalogue can obtain one, free, by addressing W. B. Saunders Company, 92 Walnut Street, Philadelphia.

A COMPENDIUM OF GENITO-URINARY DISEASES AND SYPHILIS—including their treatment and surgery, by Charles S. Hirsch, M.D., formerly assistant in the genitourinary surgical department, Jefferson Medical College Hospital; consulting physician, Social Service Hospital and Juvenile Protective Association, Philadelphia. Second edition with 74 illustrations. Philadelphia, Pa., P. Blakiston's Sons & Company. \$1.25 net.

This compend is one of Blakiston's Quiz Compend series and was written by the author to fill a need for the epitomizing of the mass of matter in the standard text-books on this subject.

The second edition has been thoroughly revised to meet the advances recently made in genito-urinary disease and syphilis. The chapter on syphilis has been brought down to date and includes a discussion of the Wasserman and Noguchi reactions, as well

as a detailed account of the principles and technic of these reactions.

For a compend this is happily complete and will be found useful to the busy practitioner as a ready reference although in no way attempting to take the place of the more complete works on these important subjects.

PRACTICAL TREATMENT Volume III—A handbook of Practical Treatment. In three volumes. By 82 eminent specialists. Edited by John H. Musser, M.D., professor of Clinical Medicine, University of Pennsylvania; and A. O. J. Kelly, M.D., late Assistant of Medicine, University of Pennsylvania. Volume III; octavo of 1095 pages. illustrated. Philadelphia and London: W. B. Saunders Company, 1912. Per volume: cloth, \$6.00 net; half morocco, \$7.50 net. W. B. Saunders Company, Philadelphia and London.

Volume three of this excellent three-volume work is before us. The same excellent standard established in the first and second volumes is maintained in this, the concluding volume of the series. Constitutional Diseases; Diseases of the Respiratory System; Diseases of the Digestive, Urinary and Nervous Systems, are treated of in the order named, as are also Diseases of the Muscles and Mental Diseases.

The entire work is one worthy of place in every progressive physician's library, being a most notable contribution to practical treatment by the best therapeutics of America and England.

The New Mexico Medical Journal

PUBLISHED MONTHLY BY COUNCIL OF THE NEW MEXICO MEDICAL SOCIETY

R. E. McBRIDE, M. D., MANAGING EDITOR - - - Las Cruces, New Mexico

Annual Subscription \$2.00. For Members, \$1.00. Single Copies 25 Cents

Entered as second class matter December 10, 1910, at the postoffice at
Las Cruces, N. M., under the act of March 3, 1879

All communications to this publication must be made to it exclusively. It will be more satisfactory to all concerned if contributions are typewritten.

Secretaries of county societies are earnestly requested to report their meetings, including the subject matter of the papers presented and the substance of the discussions.

Marked copies of local newspapers, or clippings containing matters of interest to the profession will be gratefully acknowledged. The name of the sender should be given.

Books for review should be sent to Managing Editor.

Advertisements of proprietary medicines will be accepted provided the preparations advertised have been approved by the Council on Pharmacy A. M. A., or give the formula in the advertisement. Address all communications to

New Mexico Medical Journal, P. O. Box 23, Las Cruces, N. M.

VOL. VII

OCTOBER, 1911.

NO. 1

CONTENTS

	PAGE
Editorial	1
Luna County Notes	4
Mastoid Surgery	5
Septal Deviations	15
Dental Surgery	19
Tonsillectomy	24
Abscess of the Liver	27
Control of Small-Pox in Rural Districts and Small Municipalities	31

New Mexico Medical Society

OFFICERS

President, R. L. Bradley	Roswell	
Vice-Presidents	{ L. S. Peters	Silver City
	{ M. F. Desmarais	Las Vegas
	{ J. J. Shuler,	Raton
Secretary, R. E. McBride	Las Cruces	
Treasurer, F. E. Tull	Albuquerque	
Council	{ S. D. Swope, Chairman	Deming
	{ E. B. Shaw	Las Vegas
	{ W. T. Joyner	Roswell

Dr. Hugh Crouse's Clinical Laboratory

508-509 Roberts-Banner Building
EL PASO, TEXAS

PRICE LIST

....OF....

CHEMICAL BACTERIOLOGICAL AND
MICROSCOPICAL EXAMINATIONS
FOR PHYSICIANS

TELEPHONE CONNECTION

THROAT CULTURES

Pus, ascitic, pleural, and spinal fluids for single microscopical examination	\$2.50
Cell count	2.50
Culture	10.00
BLOOD	
Red blood cell count	
White blood cell count	
Haemoglobin, together	5.00
The above plus white cell "differential"	7.50
White blood cell count and haemoglobin	2.50
Examination for malaria parasites	3.00
Widal reaction	3.00
Blood Culture	10.00
Blood time Coagulability	1.00

URINE

Regular chemical and microscopical examination, including quantity of albumin, sugar, indican, and urea, as desired	5.00
The above without urea or quantitative results	3.00
The determination of acetone and diacetic acid	3.00
Examination for tubercle bacilli	5.00
Any single quantitative examination	2.00
Other single examinations	1.25
Total nitrogen, and nitrogen of urea, ammonia and extractives	15.00

OTHER CLINICAL TESTS:

Sero diagnosis of syphilis, Noguchi system	\$15.00
Wasserman system	15.00
Sputum, microscopical examination for tubercle bacilli, etc.	2.50
Gastric contents, analysis of test meals	10.00
Feces; microscopical examination	3.00
" quantitative and qualitative of fats	special
" bacteriological examination	10.00
Tissue, section cutting and microscopical examination	\$5.00 and up
Calculi, chemical examination	5.00

OPSONIC THERAPY

Opsonic index to single organisms	5.00
Opsonic index to two organisms	9.00
Opsonic index to three organisms	12.00
Two opsonic indices to same organism	8.00
Isolating organism and making vaccine	10.00
Visits made for taking specimens at physician's fee.	

WATER

Sanitary analysis including bacteriological and chemical test, with opinion as to quality	25.00
Bacteriological examination	15.00
Sanitary chemical analysis	15.00

MILK

Mothers' milk	5.00
General chemical analysis and bacteria count	5.00
Examination for tubercle bacilli	15.00
Examination for pus and streptococci	10.00
Bacteria count, one sample	3.00
Four or more at once, each	2.00

SPECIAL WORK

Examination of blood and serum stains	special price
Toxicological analyses	special price
Special bacteriological work	special price
Inoculation of animals, 2 Guinea pigs	15.00
Sanitary inspections	special price
Special photographic work	special price
Post mortems	\$10.00 to \$25.00

The New Mexico Medical Journal

PUBLISHED MONTHLY BY COUNCIL OF THE NEW MEXICO MEDICAL SOCIETY

R. E. McBRIDE, M. D., MANAGING EDITOR - - - Las Cruces, New Mexico

Annual Subscription \$2.00. For Members, \$1.00. Single Copies 25 Cents
Entered as second class matter December 10, 1910, at the postoffice at
Las Cruces, N. M., under the act of March 3, 1879

All communications to this publication must be made to it exclusively. It will be more satisfactory to all concerned if contributions are typewritten.

Secretaries of county societies are earnestly requested to report their meetings, including the subject matter of the papers presented and the substance of the discussions.

Marked copies of local newspapers, or clippings containing matters of interest to the profession will be gratefully acknowledged. The name of the sender should be given.

Books for review should be sent to Managing Editor.

Advertisements of proprietary medicines will be accepted provided the preparations advertised have been approved by the Council on Pharmacy A. M. A., or give the formula in the advertisement. Address all communications to

New Mexico Medical Journal, P. O. Box 23, Las Cruces, N. M.

VOL. VII NOVEMBER, 1911 NO. 2

CONTENTS		Page
Editorial		35
Bernalillo County Notes		36
Salient Epidemiological Features of Pellagra		37
Surgery of the Stomach		46
Feeding in Typhoid		52
Fest's Operation for Cure of Enuresis.....		56
Minutes 2nd Annual Meeting R. S. A.		58
Massage In After Treatment of Injuries.....		59
Railway Surgeon in Role of Railway Economics		63
Book Review		66

New Mexico Medical Society

OFFICERS

- President, R. L. Bradley Roswell
- Vice-Presidents { L. S. Peters Silver City
 { M. F. Desmarais Las Vegas
 { J. J. Shuler, Raton
- Secretary, R. E. McBride Las Cruces
- Treasurer, F. E. Tull Albuquerque
- Council { S. D. Swope, Chairman Deming
 { E. B. Shaw Las Vegas
 { W. T. Joyner Roswell

We are prepared to furnish

“606”
Ehrlich's Salvarsan

ORDER BY MAIL OR TELEGRAPH

All of the following preparations constantly in stock:

Diphtheria Antitoxin
Vaccine Virus
Diagnostic Tuberculins
Therapeutic Tuberculins
Bacterial Vaccines
Antimeningitis Serum
Noguchi Test for Syphilis

Kelly & Pollard
Wholesale and Retail Druggists
EL PASO, TEXAS

The New Mexico Medical Journal

PUBLISHED MONTHLY BY COUNCIL OF THE NEW MEXICO MEDICAL SOCIETY

R. E. McBRIDE, M. D., MANAGING EDITOR - - - Las Cruces, New Mexico

Annual Subscription \$2.00. For Members, \$1.00. Single Copies 25 Cents

Entered as second class matter December 10, 1910, at the postoffice at Las Cruces, N. M., under the act of March 3, 1879

All communications to this publication must be made to it exclusively. It will be more satisfactory to all concerned if contributions are typewritten.

Secretaries of county societies are earnestly requested to report their meetings, including the subject matter of the papers presented and the substance of the discussions.

Marked copies of local newspapers, or clippings containing matters of interest to the profession will be gratefully acknowledged. The name of the sender should be given.

Books for review should be sent to Managing Editor.

Advertisements of proprietary medicines will be accepted provided the preparations advertised have been approved by the Council on Pharmacy A. M. A., or give the formula in the advertisement. Address all communications to

New Mexico Medical Journal, P. O. Box 23, Las Cruces, N. M.

VOL. VII DECEMBER, 1911. NO. 3.

CONTENTS	Page
Editorial	67
Racial Question of Procreation in the Tuberculous	72
Diagnostic Use of Tuberculin in Pulmonary Tuberculosis	79
Immunity in Tuberculosis by Inoculation of Living Tubercle Bacilli ..	86
Auto-Inoculation in Pulmonary Tuberculosis	90
Blood Pressure in Tuberculosis at High Altitude	93
Public Measures in the Prophylaxis of Tuberculosis	96
Frequency and Importance of Mixed Infection in Pulmonary Tuberculosis	100
Care of the Stomach in Tuberculosis	102
Book Review	104

New Mexico Medical Society

OFFICERS

President, R. L. Bradley	Roswell
Vice-Presidents { L. S. Peters	Silver City
{ M. F. Desmarais	Las Vegas
{ J. J. Shuler,	Raton
Secretary, R. E. McBride	Las Cruces
Treasurer, F. E. Tull	Albuquerque
Council { S. D. Swope, Chairman	Deming
{ E. B. Shaw	Las Vegas
{ W. T. Joyner	Roswell

TUBERCULINUM PURUM ENDOTIN

The isolated innocuous principle of Koch's O. T., freed from the albumose impurities which cause systemic reaction. Available for general office practice as well as for sanatorium treatment.

Permits progression of dosage at a reasonable rate even in advanced cases.

[DEAL, Medical Record, Nov. 26, 1910]

Adopted by many American hospitals and sanatoria. Authoritatively recognized as the best in efficacy and harmlessness.

Four series of each seven ampuls, constituting a "course," \$9.00.

Manufactured by the Tuberculin Society St. Petersburg, Russia

Hand-book of Tuberculin Therapy sent free by
MORGENSTERN & CO. = 24 Cliff Street, New York

New Mexico Cottage Sanitarium

Silver City, New Mexico.

ALTITUDE 6000 FEET.

Climatic Conditions Unsurpassed

MEDICAL STAFF:

E. S. Bullock, M. D.

L. S. Peters, M. D.

For Full Particulars write the Business Manager,

Wayne McV. Wilson.

The New Mexico Medical Journal

PUBLISHED MONTHLY BY COUNCIL OF THE NEW MEXICO MEDICAL SOCIETY

R. E. McBRIDE, M. D., MANAGING EDITOR - - - Las Cruces, New Mexico

Annual Subscription \$2.00. For Members, \$1.00. Single Copies 25 Cents

Entered as second class matter December 10, 1910, at the postoffice at Las Cruces, N. M., under the act of March 3, 1879

All communications to this publication must be made to it exclusively. It will be more satisfactory to all concerned if contributions are typewritten.

Secretaries of county societies are earnestly requested to report their meetings, including the subject matter of the papers presented and the substance of the discussions.

Marked copies of local newspapers, or clippings containing matters of interest to the profession will be gratefully acknowledged. The name of the sender should be given.

Books for review should be sent to Managing Editor.

Advertisements of proprietary medicines will be accepted provided the preparations advertised have been approved by the Council on Pharmacy A. M. A., or give the formula in the advertisement. Address all communications to

New Mexico Medical Journal, P. O. Box 23, Las Cruces, N. M.

VOL. VII JANUARY, 1912. No. 4

CONTENTS		Page
Editorial		107
First Treatment of Open Wounds		109
Some Unusual Surgical Experiences.....		114
The Tonsils		118
Gonorrhea in the Female		128
Gastric Ulcer		133
Conservative Surgery		136
Book Review		141

New Mexico Medical Society

OFFICERS

- | | |
|--------------------------------|-------------|
| President, R. L. Bradley | Roswell |
| Vice-Presidents { | |
| L. S. Peters | Silver City |
| M. F. Desmarais | Las Vegas |
| J. J. Shuler, | Raton |
| Secretary, R. E. McBride | Las Cruces |
| Treasurer, F. E. Tull | Albuquerque |
| Council { | |
| S. D. Swope, Chairman | Deming |
| E. B. Shaw | Las Vegas |
| W. T. Joyner | Roswell |

New Mexico Cottage Sanitarium

Silver City, New Mexico.

ALTITUDE 6000 FEET.

Climatic Conditions Unsurpassed

MEDICAL STAFF:

E. S. Bullock, M. D.

L. S. Peters, M. D.

For Full Particulars write the Business Manager,

Wayne McV. Wilson.



WHEN YOU WRITE
TO ADVERTISERS
PLEASE MENTION
THE JOURNAL

The New Mexico Medical Journal

PUBLISHED MONTHLY BY COUNCIL OF THE NEW MEXICO MEDICAL SOCIETY

R. E. McBRIDE, M. D., MANAGING EDITOR - - - Las Cruces, New Mexico

Annual Subscription \$2.00. For Members, \$1.00. Single Copies 25 Cents

Entered as second class matter December 10, 1910, at the postoffice at
Las Cruces, N. M., under the act of March 3, 1879

All communications to this publication must be made to it exclusively. It will be more satisfactory to all concerned if contributions are typewritten.

Secretaries of county societies are earnestly requested to report their meetings, including the subject matter of the papers presented and the substance of the discussions.

Marked copies of local newspapers, or clippings containing matters of interest to the profession will be gratefully acknowledged. The name of the sender should be given.

Books for review should be sent to Managing Editor.

Advertisements of proprietary medicines will be accepted provided the preparations advertised have been approved by the Council on Pharmacy A. M. A., or give the formula in the advertisement. Address all communications to

New Mexico Medical Journal, P. O. Box 23, Las Cruces, N. M.

VOL. VII FEBRUARY, 1912. No. 5.

CONTENTS

	Page
Editorial	143
Empyema	147
Epidemic Meningitis	150
How to Choose a Doctor	153
Surgery from the Standpoint of the Patient	159
Foreign Bodies in the Eye	165
The Importation of Hookworm Disease	174
Proposed Medical Legislation	177
Book Review	185

New Mexico Medical Society

OFFICERS

President, R. L. Bradley	Roswell	
Vice-Presidents {	L. S. Peters	Silver City
	M. F. Desmarais	Las Vegas
	J. J. Shuler,	Raton
Secretary, R. E. McBride	Las Cruces	
Treasurer, F. E. Tull	Albuquerque	
Council {	S. D. Swope, Chairman	Deming
	E. B. Shaw	Las Vegas
	W. T. Joyner	Roswell

New Mexico Cottage Sanatorium Silver City, New Mexico

FOR THE TREATMENT OF TUBERCULOSIS

PHYSICIAN-IN-CHIEF
E. S. BULLOCK, M.D.

MANAGER
WAYNE M^{RS}. WILSON

WINTER CLIMATE IDEAL

Beautiful situation in the mountains of southern New Mexico. Climatic conditions wonderfully perfect. Cool summers. Moderate winters. A flood of sunshine at all seasons. Food ex-

COTTAGES

cellent and abundant. All the milk our patients can consume from our own dairy of selected cows. Moderate charge. Institution partly endowed. Separate cottages for patients. Complete hospital building for febrile cases. Separate amusement pavilions for men and women. Physicians in constant attendance. Livery for use of patients. Well equipped laboratory, treatment rooms, etc. All forms of tuberculosis received. Special attention to laryngeal tuberculosis. Tuberculin administered in suitable cases. One of the largest and best equipped institutions for tuberculosis in America. Patients received only through physicians.

WRITE TO THE MANAGER FOR DESCRIPTIVE BOOKLET.

Medical Books---Easy Terms

NEW -LATEST EDITIONS OF RECENT
ISSUE-PREPAID

\$3 Per Month to Responsible Physicians

Latest Standard Works on

SEXUALITY

- ROBINSON, Never Told Tales—Graphic stories of disasters of sexual ignorance. Third edition. Cloth, \$1.
KISCH, Sexual Life of Woman—A Physiological-pathological hygienic study exhaustively treated by an able authority. 700 pages, 97 illustrations. Cloth, \$5.
KRAFT-EBING, Psychopathia Sexualis—Twelfth edition, English. This celebrated monograph, \$4.
TALMEY, Women—On the normal and pathological emotions of love. 260 pages, 23 drawings, \$3.
PARK, Human Sexuality—Laws, Anomalies and Relation of Sex, with reference to Contrary Sexual Desire. Third edition, 476 pages, \$3.
FCREL, Sexual Question—A Scientific, Psychological, Hygienic and Sociological Study, just translated from the French. 550 pages \$5.
SANGER, History of Prostitution—Its Extent, Cause and Effects Throughout the World. 707 pages, \$2.50.
VECKI, Prevention of Sexual Diseases—The A.B.C. of Sexual Diseases, Prostitution and Individual Prophylaxis. Cloth, \$1.50.
COOPER, Sexual Disabilities of Man—and their treatment. Johns Hopkins Bulletin says: "A sensible and judicious book on sterility and impotence." 204 pages, cloth. Second edition. \$2.
SENATOR & KAMINER, Marriage and Disease. Covers every conceivable relationship of diseased conditions in marriage. Condensed edition, 452 pages, \$2.50.

L. S. MATTHEWS & CO.

MEDICAL BOOKS

3333 OLIVE STREET .ST. LOUIS, MO.

WHEN YOU WRITE

TO ADVERTISERS

PLEASE MENTION

THE JOURNAL

The New Mexico Medical Journal

PUBLISHED MONTHLY BY COUNCIL OF THE NEW MEXICO MEDICAL SOCIETY

R. E. McBRIDE, M. D., MANAGING EDITOR - - - Las Cruces, New Mexico

Annual Subscription \$2.00. For Members, \$1.00. Single Copies 25 Cents

Entered as second class matter December 10, 1910, at the postoffice at
Las Cruces, N. M., under the act of March 3, 1879

All communications to this publication must be made to it exclusively. It will be more satisfactory to all concerned if contributions are typewritten.

Secretaries of county societies are earnestly requested to report their meetings, including the subject matter of the papers presented and the substance of the discussions.

Marked copies of local newspapers, or clippings containing matters of interest to the profession will be gratefully acknowledged. The name of the sender should be given.

Books for review should be sent to Managing Editor.

Advertisements of proprietary medicines will be accepted provided the preparations advertised have been approved by the Council on Pharmacy A. M. A., or give the formula in the advertisement. Address all communications to

New Mexico Medical Journal, P. O. Box 23, Las Cruces, N. M.

VOL. VII MARCH, 1912. No. 6.

CONTENTS

Page

Editorial	187
Tendon Work for the General Practitioner	192
Thyroid and Parathyroid	196
Pancreatitis	199
Diagnosis of Malignant Disease	201
Hookworm Disease	206
Book Review	211

New Mexico Medical Society

OFFICERS

- | | |
|--------------------------------|-------------|
| President, R. L. Bradley | Roswell |
| Vice-Presidents { | |
| L. S. Peters | Silver City |
| M. F. Desmarais | Las Vegas |
| J. J. Shuler, | Raton |
| Secretary, R. E. McBride | Las Cruces |
| Treasurer, F. E. Tull | Albuquerque |
| Council { | |
| S. D. Swope, Chairman | Deming |
| E. B. Shaw | Las Vegas |
| W. T. Joyner | Roswell |

New Mexico Cottage Sanatorium Silver City, New Mexico

FOR THE TREATMENT OF TUBERCULOSIS

PHYSICIAN-IN-CHIEF
E. S. BULLOCK, M.D.

MANAGER
WAYNE McV. WILSON



SUMMER CLIMATE IDEAL

Beautiful situation in the mountains of southern New Mexico. Climatic conditions wonderfully perfect. Cool summers. Moderate winters. A flood of sunshine at all seasons. Food ex-

COTTAGES

cellent and abundant. All the milk our patients can consume from our own dairy of selected cows. Moderate charge. Institution partly endowed. Separate cottages for patients. Complete hospital building for febrile cases. Separate amusement pavilions for men and women. Physicians in constant attendance. Livery for use of patients. Well equipped laboratory, treatment rooms, etc. All forms of tuberculosis received. Special attention to laryngeal tuberculosis. Tuberculin administered in suitable cases. One of the largest and best equipped institutions for tuberculosis in America. Patients received only through physicians.

WRITE TO THE MANAGER FOR DESCRIPTIVE BOOKLET.

TEN POTENT REASONS WHY

WE CAN BEST SERVE YOUR BOOKS WANTS

BECAUSE---We carry the most comprehensive stock, new and second-hand, in America and can supply any book published. Our exchange system solves the problem of maintaining your library in latest editions as books no longer needed are dead timber to you--we exchange the salable volumes for your present wants.

Send for our
**CUT=PRICE
LIST**
Just issued—1912 Edition
Offering Exceptional Values

Send titles and dates. Our facilities for obtaining rare books are unexcelled. When you wish to read up on a special subject you can later exchange such books for others

more suited to your constant needs. Circulars sent you frequently on what is new. Our credit policy is generous. By trading with us you have but one account, as we handle books of all publishers, old or new. In fifteen years experience, we have acquired unrivaled facilities for intelligently serving the the medical profession. Write us now.

L. S. MATTHEWS & CO., MEDICAL BOOKS

3333 OLIVE STREET.

ST. LOUIS, MISSOURI



New Mexico Medical Journal

Sup
April 1912

VOLUME VIII.

NUMBER 1

'LAIBOSE' IS A FOOD

'Laibose' often makes a special appeal to the consideration of the physician because of its content of fat. It contains the fat of milk perfectly combined with the protein and carbohydrate of pure whole milk and whole wheat, the entire digestible substance of the wheat (no cellulose), having been converted by a physiological process.

To give 'Laibose' as a source of fat is to give fat in a specially assimilable form, because of its definite association with the other food constituents---a manifest advantage.

'Laibose' is offered with an explicit statement of its content of protein, carbohydrate, fat and ash. The percentage of each constituent when diluted with water in various proportions is shown simply for convenience.

If you have not tried 'Laibose', please send for circular and sample.

'Laibose' was originated and is made by

FAIRCHILD BROS. & FOSTER
NEW YORK

14704



The New Mexico Medical Journal

Volume VIII

APRIL, 1912

No. 1

E · D · I · T · O · R · I · A · L

The New Mexico Medical Journal is not responsible for the opinions expressed by any of its contributors.

It is hard for a medical mind to find any reason whatever for allowing a Christian Scientist representation upon the Medical Board, or why they should be excepted in its regulations, or exempted from its inclusions. In the first place it is a religious sect in its teachings, precepts, and practices. It is not one either, which is based upon any scientific principles, and its name in reality is a misnomer. In its scope there is no study, nor a course of teaching, other than that based upon religion. There are no scientific investigations to inspire confidence in the thinking type of mind, nor classification of diseases which would add depth to its literature. They have no method of diagnosis. Their therapeutic efforts are directed towards having the patient believe that he or she is not sick, or is without pain, and that there is no such thing as pain, but merely ones' belief that there is. To reason in this manner is to disbelieve our own senses, which have been created and functioned by an all-wise God, and which we are taught to believe, for our protection, instruction, and education.

Our bodies are subject to changes, diseases, and death, as is all created matter. In all the vegetable and animal world alike we are confronted with

the same conditions of health and disease. Even the rocks in the mineral world undergo changes wrought by time and decay, and ultimately are reduced to soil. Should our bodies of a more delicate nature and construction, be less stable; being dependent upon fluids; softer and denser tissues; without a constant stable environ, nutrition, or phsyhic state, than the rocks? Is there sane logic in a person with fever, pain, and a decided malady saying that he is not sick, or is without pain? It is a moral, physical, and psychic lie, when reduced to the abstract.

The mortality of the "Scientists" has become so great that certain Life Insurance Companies will not accept them as risks, and the families of these are not subjected to protection of their lives before death, nor do their families receive financial relief after the provider has passed away, which their fellow men enjoy.

Where have they a school or university, or a place for scientific investigation, and unbiased study of disease and their science? They have none, and only a Mother Church, and they are following and accepted the teachings of one person. Should they then be placed on an equal basis and footing with those of a profession who

have worked, studied, and grown, and evolved into the able higher men of our profession today? Studying for the sake of truth?

The idea put forth that every man should be left to exercise his own rights of belief is true in a measure. It is false in another measure, however paradoxical this may seem. History does not bear out this belief. The South thought the same in her dark days of slavery. The United States Government thought otherwise, and then she enforced her belief; and who of those born and bred in the South, of today, would have slavery exist, rather than the freedom of our entire people, with the blight and stigma of slavery removed—and the present solidarity of our people and nation? In the principles of ethics, this idea of self freedom holds good only when one being is involved. When another is thrown in relation with him, his rights must conform with those of the other, and here began the necessity of law.

They do not deserve more recognition from the State than do the Voodooists in Louisiana, and East Texas. They in their religious rites believe in human sacrifice, and sacrifice human lives in this religious belief. The Scientists permit it in a different way, yet is a religious rite. Theirs is an absence of remedial agencies, other than the relief afforded through prayer, and their children are sacrificed through diphtheria and other acute infectious maladies, where they might be saved and made more comfortable through scientifically developed agencies. Where these human lives are at stake, should the Scientist be excepted from the healing restrictions. If so then open the matter absolutely for

all comers. They admit that in cases of epidemic diseases, that the regular practitioner is called in to protect the general public. If they are incompetent to protect the public health, then they are incompetent to practice any form of healing. If the regular practitioner is competent to protect the public health, he is equally competent to administer to the wants of the infirm Scientists. If the public is to be protected by the regular, then the younger members of the family, below the age of discretion and self will, should be protected by the State, and this the State owes to the future growth and welfare. It is universally believed that we are our "brother's keeper." It is a crime which we are all responsible for, to allow cases of an infectious type to die without care, other than prayer, when the profession has demonstrated its usefulness in the past. In a different way it is negligence on the part of the State to allow this, and equally as much as to allow the criminal to go at large unrestrained, or the ungovernable insane.

The Government has taken steps to prevent polygamy because of its undermining influence upon society, this too being a religious teaching. The Scientists are just as dangerous to society, because of the extensive disregard or organic conditions in the young, which will weaken the adults of the growing generation, and result in an inferior race. What can prayer by the Scientist do for the infant with congenital syphilis: that one with gonorrheal ophthalmia; those with inanition; the scorbutic; the rachitic; and the score of other maladies that being met scientifically, yield men and women who have added much in the past

to the worlds achievements. What can be done with carcinoma, sarcomata, and many other maladies that surgery has proven a boon to? The sect not dwelling upon diagnostics, and a separation of diseases, but all practically treated in the same generic way prove beyond a question of a doubt their incapacity to handle any type of infirmities. Yet all of these in another way are just as destructive to society ultimately, as is polygamy.

God gave us our intelligence for a purpose. He helps those who first help themselves. Ones belief and religion is very sacred to him, and every man should have a religion which should be actively practiced. But religion and healing should be separate and apart. Religion is intended for soul's well-being and cultivation: healing for the material part of man, and they are integral professions, the one for the immortal, the other for the mortal.

There is a great amount of good being accomplished by suggestive therapeutics, which is not inferior to Christian Science teaching. However the basis of the one is that which science has determined as the will, and its effect upon the subconscious mind. The other that based upon prayer. The one a scientific determination, and the other a verbal deduction and application.

So after taking the matter from all standpoints, it is hard to reach a logical reason in ones mind as to why they should claim so much, except as is induced by the vagaries of the human belief.

T. C. S.

TWO EXCELLENT THERAPEUTIC AGENTS

Two most excellent therapeutic agents, that have many meritorious qualities are commented upon below, and as a rule the physician will greatly benefit his patient by prescribing them as a "first" choice, when the pharmacological conditions indicate their use.

Liquor Ferri Albuminati, N. F.

The solution of Albuminate of Iron contains approximately two-thirds of one per cent of metallic iron in the form of albuminate. The average dose is 8 Cc. (2 fluidrams), representing 4-5 grain of metallic iron. It is flavored with Aromatic Elixir, and contains 22 per cent of Alcohol.

The Solution is prepared by the action of ooxychloride of iron on egg albumen. It is quite clear, palatable, of a rust-brown color and has a faintly acid reaction. It may be given in milk.

Many practitioners consider this Solution the most readily assimilable of iron preparations, but our present knowledge of the pharmacology of iron would indicate that all the different forms of the metal, organic and inorganic, have the same fate in the body; that is, they behave chemically and physiologically alike. The preparation is, however, one of the least irritant to the stomach.

All compounds of iron, administered by the mouth, are first converted into loose organic compounds, in which form they are absorbed from the entire surface of the intestinal canal, but particularly from the duodenum. The absorbed part penetrates the epithelium, passes through the stroma into the lacteals, and from here to the mesenteric

lymph glands and through the thoracic duct into the blood. From the blood it is deposited, in an easily decomposed organic form, in the cells of the haematopoietic organs, in the liver and red marrow, and particularly in the spleen, as a "reserve stock." The utilization of the iron, its transformation into hemoglobin never rises above normal.

Hence the administration of iron is useful only in those conditions in which the normal income or the assimilation of iron is deficient. According to the above correct theory, which is that of Tartakowski (1903-1904), it is therefore *practically useless for the physician to employ any of the numerous specialties or special secret compounds of iron in the treatment of disease. Nothing can possibly be gained, and their employment only adds to the patient's expense for the benefit of the manufacturer.*

Very brilliant results are secured by the administration of this preparation in most instances of anemia. Maximum doses, in combination with a correct diet, should prove of great benefit in diseases of this character. It is a preparation worthy of most careful study. The tendency to constipation must be met by cascara sagrada, aloes, or other cathartics.

Bethanaphthol, U. S. P.

Bethanaphthol is an efficient, safe and powerful antiseptic and parasiticide; internally in such ailments as typhoid fever, chronic diarrhoea, etc. Externally, in two to ten per cent ointment in parasitic skin diseases. Average dose, 0.25 Gm. (4 grains). Formerly called Naphthol.

It is a monatomic phenol occurring in coal tar; usually prepared from Naphthalene. It occurs in Colorless,

pale buff-colored or yellowish-white, shining crystalline laminae or powder, with a faint phenol-like odor, and a sharp, pungent taste. Insoluble in water, Give in dry form. powder, capsules or cachet.

THE SANITARY PRIVY

The Department of Agriculture has recently issued Farmers' Bulletin 463 on the Sanitary Privy. Inasmuch as soil pollution is so directly responsible for some of our worst diseases, hookworm and typhoid fever for instance, this bulletin is a most important and timely one. It would well repay any physician to obtain a copy of this bulletin for the benefit of his practice inasmuch as complete and specific directions are given for the proper construction of the privy.

We quote the concluding paragraphs of the bulletin:

Civic Responsibility in Respect to Privies

Lack of sanitary privies on neighboring farms may be responsible for cases of typhoid fever, hookworm disease, and other infections on farms which are provided with sanitary privies, because disease germs may be carried for considerable distances by flies, by animals, by feet of persons, by wagon wheels, or by drainage from one farm to another.

In view of these well established facts it is evident that among the highest duties that rest upon a farmer, as a father and citizen, is not only to have a sanitary privy on his farm, but to insist that the pollution of soil with human excreta be prevented throughout the entire neighborhood by the use of sanitary privies.

In the United States about 400,000

persons suffer from and about 35,000 die from typhoid fever each year; over 2,000,000 persons have hookworm disease. Thousands of these deaths and many thousands of these cases might be prevented by the simple use of sanitary privies. A compulsory sanitary privy law or ordinance should therefore be enacted and be strictly enforced in every locality not provided with a properly maintained sewer system.

We clip the following from the Maine Medical Journal. With the exception that we have no library, the remarks are applicable to our conditions:

Support of the State Journal and Library

The Maine Medical Journal and the Maine Medical Library are owned and controlled by the State Association under the supervision of the Council. In 1910, \$700 was voted to run the Journal, while in 1911, \$1,100 was voted toward running the Journal and taking over the Maine Academy Library as the Maine Medical Library to be run for the benefit of the members. This year, the Journal received nearly \$300 from the Maine Academy treasury and will be able to complete its year's work without a deficit. Six pages of advertisements would enable the journal to continue its work without a handicap. Eight pages would give ample funds while each page above this could be turned back into the treasury or to a defence fund if established.

This can be readily done if each member will restrict his patronage to Journal advertisers. The concerns, dependent largely on the medical pro-

fession for their existence, ought to be willing to contribute a small amount annually in a manner that offers them a good return for their money. No reputable concern will sacrifice their business if they realize that it depends on co-operation, which is a large factor in the business world.

Think this over, doctor, and if you desire to see the Journal, the library, etc., continue, do your part and we will do ours.

From the Sixth Annual Report of the Carnegie Foundation for the Advancement of Teaching, we quote relative to Medicine:—

"An upward movement in medical education in the United States has been in progress since the early nineties; but a systematic effort on the part of the medical profession to fulfill its obvious responsibility in the matter did not take place until the Council on Medical Education of the American Medical Association was formed in 1905. At that time there were 160 medical colleges in the United States. The total annual attendance was 26,147, with 5600 graduates in that year. Gradual improvement reduced the number of schools, exclusive of osteopathic establishments, to 144 in the year 1909; the number of students to 21,526; and the number of graduates to 4515. Very great progress has been made during the past year. The total number of schools now in existence, exclusive of osteopathic schools, is 120, the lowest figure that has been reached in over twenty years. The total number of students last year was 19,786, and the total number of graduates 4273. The following institutions have passed

out of existence within the year:

Arkansas—Little Rock College of Physicians and Surgeons.

Colorado—Denver and Gross College of Medicine.

Georgia—Hospital College of Medicine, Atlanta.

Illinois—American Medical Missionary College, Chicago and Battle Creek, Mich; Illinois Medical College, Chicago; Reliance Medical College (*night school*) Chicago; National Medical University (*night school*) Chicago; College of Medicine and Surgery (Physio-Medical), Chicago.

Kentucky—Southwestern Homeopathic Medical College, Louisville.

Louisiana—Flint Medical College, (*suspended*), New Orleans

Maryland—Woman's Medical College of Baltimore; Atlantic Medical College, Baltimore.

Michigan—American Medical Missionary College, Battle Creek, and Chicago, Ill.

Mississippi—University of Mississippi Clinical School, Vicksburg.

Missouri—Barnes University Medical School, St. Louis; Hippocratean College of Medicine, St. Louis.

Ohio—Pulte Medical College, Cincinnati; College of Physicians and Surgeons, Cleveland.

Oklahoma—Epworth College of Medicine, Oklahoma City.

Tennessee—Chattanooga Medical College; Knoxville Medical College; Medical Department of the Universities of Nashville and Tennessee at Nashville; College of Physicians and Surgeons, Memphis.

West Virginia—West Virginia University College of Medicine, Morgantown.

"With the closing of these institu-

tions, the physio-medical sect disappears completely, and the homeopathic schools are reduced to twelve, the lowest figure that they have reached since 1880; the eclectics to seven, the lowest number that they have reached since 1900.

"The actual improvement in medical education, however, has been far greater than these mere figures indicate. The continued criticism of proprietary medical schools and the publicity given in recent years to the discussion of these questions have not only awakened the public to some realization of its own interest, but have also aroused to a fair sense of responsibility many institutions that have previously taken their obligations lightly. It will always remain one of the strangest episodes in our educational development that strong institutions, including some great state universities, have thoughtlessly lent their names and prestige to shelter proprietary medical schools, in the conduct of which they took no part and to the support of which they contributed nothing. In this whole matter a decided awakening has taken place. The fact that the institutions of learning themselves begin to recognize their own obligations is one of the most encouraging features of true progress."

President Bradley has made the following appointments of fraternallegates:

Colorado, Dr. F. T. B. Fest, East Las Vegas.

Arizona, Dr. L. S. Peters, Silver City.

Texas, Dr. F. De la Vergne, Albuquerque.

We are reliably informed that the Judiciary Committee of the House of Representatives will report to the House practically the Medical Practice Act of Texas in lieu of the bill prepared by the Legislative Committee of the New Mexico Medical Society. The Texas bill is a joint bill in that it provides for a mixed board.

EPIDEMIC OF SEPTIC SORE THROAT

For several months there has been prevalent in Baltimore an epidemic of sore throat which has been accompanied by marked swelling of the cervical lymph nodes and by a considerable amount of constitutional disturbance. Epidemics of this disease have been noted in Europe from time to time; the first record of it in this country is that of an epidemic which occurred in Boston last spring. In the Boston epidemic most of the cases of the disease occurred in individuals over forty and children were almost exempt. In Boston, and in most of the epidemics which occurred abroad, the spread of the disease has apparently been through the milk supply, although it seems highly probable that the disease may also be transmitted by direct contact. The disease has also been noted this winter in Chicago, and Davis and Rosenow have a short article on it in the *Journal of the American Medical Association* for March.

The cause of the disease is a curious organism which may be readily demonstrated in the smears from the throat, or from exudates, and it usually appears as a small diplococcus, often in short chains. In the cultures the organism has a tendency to form longer

chains, and it seems to occupy a position between the streptococcus pyogenes and the streptococcus mucosus. Clinically the disease is very striking; there is first involvement of the throat, with considerable redness, often the entire throat being a dusky red in color; in some instances there is a typical follicular tonsillitis, while in other cases there is a definite membrane, usually limited to the tonsil. This membrane is not as adherent as that seen in diphtheria but might be readily mistaken for it. There is considerable prostration and fever, and there may be swelling of the lymph nodes almost from the outset, but the usual history is that after two or three days there is a remission and then after a day or two more a recurrence of fever and other symptoms, with the appearance of marked swelling of the cervical lymph nodes, and the name bubonic sore throat has been suggested. The course of the disease is slow, it may last from one to three weeks and there is an unusual tendency to complications, including oedema of the eyes, which is usually unilateral, involvement of the nose, otitis media, erysipelas, peritonitis and abscesses. Many cases have been attended with marked gastro-intestinal disturbances. There are other cases in which the child is taken very suddenly with very high temperature, 105° and 106° F., and this temperature may tend to persist in spite of the usual antipyretic measures. There are marked prostration and depression of circulation and respiration, and many of these cases died within the first three or four weeks of the disease.

As prophylactic measures, two things can be suggested—first, the boil-

ing of all milk used for food; and second, the isolation of the patients. The treatment of the disease is along general lines and the most successful measures are those which tend to support the strength of the patient and keep up the nutrition; fresh air in the sick room and careful nursing are also important. As a rule severe purges should not be used. Surgical interference is often necessary for involvement of the ear or for abscesses or for the peritonitis, but in most of the peritonitis cases toxæmia is so great and the pa-

tient's condition so alarming that laparotomy offers but little hope of relief. The lymph nodes should not be incised unless there is definite pus formation and notwithstanding the fact that they reach an enormous size they practically always subside without suppuration. Cold applications may be made locally, or such sedatives as lead water properly diluted or belladonna ointment may be used. (Bulletin of the Medical and Chirurgical Faculty of Maryland, April 1912.)

The Catholic Doctrine on "Interruption of Pregnancy."

By W. R. Tipton, M. D., East Las Vegas, N. M.

(A reply to the address of President Dr. F. T. B. Fest, of the New Mexico Society for the Prevention of Tuberculosis, published in the New Mexico Medical Journal, December, 1911.)

The attitude of the Catholic Church toward the medical practice called interruption of pregnancy was severely censured in the New Mexico Medical Journal for December, 1911, pages 74, 75, and 76, in an article by Dr. F. T. B. Fest. To show that the criticism was not based upon a clear and adequate knowledge of the Catholic Doctrine on the question, is the object of the present article.

Let it first be stated that the opinion of Catholic theologians on the present topic has not at all times been unanimous. In the past great latitude was left them, and while the large majority was against the practice in almost all cases, a few eminent divines vigorously supported it in cases of extreme necessity. The Church of Rome is not the intellectual tyrant it is often said to be. Conclusions held forth by her as Catholic teaching are generally the result of centuries of free discussion, enlightened research and mature deliberation. It is only after a thorough investigation by the most competent authorities that a decision is issued. The decision is then accepted by the contending parties, not merely on account of the prestige enjoyed by the tribunal pronouncing, but because of the conviction that the

sentence is based upon the longest study and most conscientious examination.

Coming now to our question—some authoritative Roman decisions of recent date allow no longer any dispute among Catholics. They likewise prove the inexactness of the assertion made in the article in the New Mexico Medical Journal, that the "Roman idea is to protect the fruit of conception under all circumstances."

1st. All modern theologians agree in establishing the following principles.

(a) If the mother is dangerously ill and her child is supposed to be sufficiently developed to be able to live by itself, as is usually the case after the seventh month of pregnancy, it is entirely lawful to accelerate its birth.

(b) Even before the seventh month the acceleration of child birth is lawful when the mother is in serious danger, but only indirectly.

By *indirectly* we mean by processes that make accelerated child birth *unintentional*.

Let the mother's life be in danger—there are remedies which irrespective of her pregnancy are known to afford relief. Such remedies are lawfully administered even if it be foreseen that there is a possibility of their resulting in a premature delivery. What is *in-*

tended by the physician is the mother's health and life. The possible ejection of the fetus, he does not *intend*; he forsees it as a possible unavoidable effect.

This is lawful, as it is lawful to deprive a man of the use of his mental faculties by chloroform. What is intended directly by anaesthetics is the suspension of sensibility; that of the higher powers of mind will also result but quite unintentionally. A quack is lawfully arrested and sent to jail, though it is foreseen that his poor wife and children will have to starve in the meantime. An assassin is justly dragged to the scaffold, though his innocent family will be ruined. Cases of an action having a twofold affect, one good, which is intended, the other evil which is merely permitted because unavoidable, are of daily occurrence in life.

It is therefore inexact to say that "interruption of pregnancy" is condemned by Catholic theologians "under all circumstances."

2nd. It is an equally inexact statement which declares that the Church's severity on this point springs from the reason that "the soul has only a value in the heavenly market when baptized" as is asserted in the article in the "Journal."

If that were the reason the Catholic Doctrine could be as broad as that of any modern doctor. A child may be validly and licitly baptized in its mother's womb through a syringe. We might say to our Catholic doctor; "Be sure to baptize the child and then go ahead."

The Church's reason is the divine command "The innocent and just person thou shalt not put to death."

The child is, as its mother, a human being; it has its own right to life: it is entrusted to its mother in all its risks; she, above all others is to protect that right to life. The child is an innocent little person; it cannot be considered as an unjust aggressor; it is forced by nature to be where it is and how it is. To intentionally destroy an innocent human life in order to save another one, we hold to be criminal, even if the life we aim to save be more valuable and important to society. The command "thou shalt not kill" remains, so long as it is a question of an "innocent and just person."

This is the Catholic Church's position. Her attitude may be contemptuously sneered at as superstitious, but she does not stand alone. Sound medical authority is in accord with sound theology. "I say it deliberately and with whatever authority I possess, and I urge it with all the force I can muster, that we are not justified in destroying a living child," said Doctor James Murphy at the sixty-first Annual Meeting of the British Medical Association in 1893 (Brit. Med. Journ., 26 Aug. 1893.) Dr. Hodge of the University of Pennsylvania, says: "often, very often, must all the eloquence and all the authority of the practitioner be employed; often he must, as it were, grasp the conscience of his weak and erring patient, and let her know in language not to be misunderstood, that she is responsible to the Creator for the life of the being within her." Wharton and Shiles Med. Juris., on abortion, 11.)

The legislation of modern civilized nations is not as loose as the statement in the article in the Journal would give us to understand. Though not so se-

were as in past centuries, "the French law punishes the abortionist with imprisonment, and physicians, surgeons and pharmacists who prescribe or furnish the means with the penalty of forced labor (Cath. Cyclop. on Abortion). In England, according to Blackstone, modern law looks upon the killing of a child in its mother's womb as a heinous misdemeanor," and in the United States we are not without laws directed against the odious practice.

After the foregoing an appeal to Christianity in favor of infanticide seems to be strangely out of place, to say the least. Yet we read in the article in the Journal: "Christianity is the religion of highest love and it is the aim of love to prevent suffering and misery." Such an exponent of Christian love as Saint Paul is loud in condemnation of doing "evil that there may come good" (Rom. III, 7). The end will upon no occasion justify the means.

3rd. The article thus far commented upon becomes rather amusing when it states that "While the Roman doctrines forbid absolutely interference with the pregnancy of the married, probabilism and casuistry found excuses for the unmarried." In support of this bold affirmation the reader is referred to 'authorities on Roman morals' such as Liguori, Busenbaum, Settler, Sanchez P Gury, etc.

Roman morals stand high above self contradiction. As has been stated above, Catholic opinion on the subject under discussion has not been one and the same at all times. Before Innocent XI (1676-1688) some theologians thought it lawful for the married to procure premature birth in

certain cases. They granted the same right to the unmarried. They were consistent. Innocent XI proscribed the following proposition; "It is lawful for a girl to procure abortion before the quickening time, in order to avoid death or infamy." Since then no Catholic Moralist has favored abortion or found excuses for the unmarried. Liguori and Gury teach precisely the opposite. As to Vicar general Rabeyrolle, Rousset, H. Dumas, J. Marin, obscure names in moral theology no means are at hand to ascertain their thought. Sanchez (1550-1610) and Busenbaum (1600-1668) are pre-Innocentian. Besides being consistent with themselves they based their doctrines on the data furnished them by the science of their times, for the question was in regard to the time before quickening.

Modern science by telling us that a spiritual and immortal soul vivifies the fetus from the moment of conception, or shortly after, precludes the possibility of regarding the same in any light but that of an innocent human being, the direct and intentional destruction of whom is nothing less than murder. This is the unanimous doctrine of modern Catholic Theologians, Lehmkuhl, Bucceroni, Noldin, etc.

4th. Other remarks occurring in the article under consideration—the invention of dogmas, etc., etc.—coming as they do from an incompetent authority, and having no necessary bearing on the main point at issue, are purposely disregarded.

In concluding, I take great pleasure in acknowledging my indebtedness to Rev. J. M. Marra, S. J., for his valuable assistance in the preparation of this article.

Treatment of Pelvic Inflammation

L. G. Rice, M. D., Albuquerque, N. M.

Read by title at the 30th Annual Meeting of the New Mexico Medical Society, East Las Vegas, N. M., September 6th-9th, 1911.

Mr. President and Members of the New Mexico Medical Association,

In dealing with the subject, "Treatment of Pelvic Inflammation" I will limit my paper to the uterine adnexa.

In beginning I wish to state that I have nothing new to offer on this subject, simply wish to review the subject with you, and state what I consider the safest and best plan to follow in this, one of the most important subjects of surgery.

I think I am perfectly safe in saying that each of us who is interested in this branch of surgery can recall cases whose physical condition has been made far worse by a hasty and radical operation, where if more time had been consumed and followed by a conservative operation the future would have been far brighter for both the patient and the surgeon.

The question whether the case is to be treated medically or surgically is one for the most careful judgment on the part of both the attending physician and the surgeon. Regardless of whether there is pus formation or not the treatment to be instituted depends somewhat on the organism causing the inflammation, if there be any.

We cannot say that an acutely in-

flamed tube or ovary should be removed at once, as we should say of an inflamed appendix. An acutely inflamed tube or ovary rarely threatens life immediately, the inflammatory process is relatively slow and the formation of protecting adhesions is almost certain. Rarely do we see fulminating peritonitis from acute tube or ovarian inflammation. It is almost an established fact where there is a rise of temperature, pulse and a leucocytosis, the less we do surgically the better the outcome will be for the patient.

For instance, the gonococcus becomes sterile or inactive after a few months have passed, then why operate early? The streptococcus remains active almost indefinitely and there is always grave danger of inviting a fatal peritonitis. Certainly we are not justified in proceeding with radical measures in mild infections and in primary attacks of more virulent types, except to make an extra-peritoneal drainage for accumulated pus. Therefore in acute forms I think the best plan to follow is to place your patient absolutely at rest, flat on her back in bed, with plenty of fresh air and sunshine, if possible. Give light but very nutritious diet. Keep bowels open with

salines and hot enemas. Use hot saline vaginal douches. Temperature of enemas and douches from 110 to 120 Fahrenheit. Apply ice caps to abdomen but if not well borne change to heat. Heat is best where there are pelvic exudates with normal temperature and pulse; it is best applied in form of dry, hot air, which can be used at residence, office or hospital with a very simple apparatus. This apparatus was first described by Gillmore of Chicago, and is made of sheet iron, cone shaped, lined with asbestos and provided with eighteen sixteen-candle-power lamps, a separate switch for each six lights. The patient's abdomen is bared to the umbilicus, the conical apparatus is placed over it, and a large blanket covering the surface and including the two ends, is so placed as to retain the heat, which is regulated according to the patient's endurance for heat. The average application is for about twenty minutes at a temperature of 200 to 250 Fahrenheit. This treatment is used once every two or three days.

If leucocyte count is low and the offending organism is known or can be found out, do not hesitate but use the bacterial vaccines liberally, especially the autogeneous vaccine if obtainable, otherwise the stock vaccines.

What is known as the atropine treatment is well recommended in the gonorrheal forms. The drug is used both by mouth and hypodermatically and is continued during the acute stage to prevent rythmic contractions of the uterine structure and its adnexa. This acts as a prophylaxis against the extension of the disease. By following this plan of treatment it is surprising how

many cases will be absolutely cured with no return.

Of course there are a few cases which will become chronic and will have to be treated accordingly, which is as follows, either operative or non-operative. If it be an exacerbation of a chronic case it will be far better in the majority of cases to treat as above outlined until the acute symptoms have subsided, which is as a rule only a few days, then if there is any palpable abscess, or any mass or masses within the pelvis they should be removed at once by one familiar with pelvic surgery. If no tumor or fluctuating mass is palpable one is perfectly safe in keeping his patient fairly quiet with much rest and the above treatment as outlined for the acute cases, especially the heat and bacterial vaccines plus tamponage.

I use a tampon of ichthyol, iodine and glycerine which is inserted every other day and occasionally preceded by painting the vagina vault with Churchhill's tincture of iodine. Massage to abdomen is dangerous and electricity does not benefit these cases in the least. I think that we should use the vaccines more than we are doing.

Surgical treatment is undertaken by two routes, the vaginal and the abdominal. I prefer the vaginal where pus sacs are to be drained; especially those that are palpable through the vagina. It is a simple operation and many a time all that is necessary. It is remarkable how soon the inflammation will subside and be followed by a prompt healing. Simply open into Douglas' pouch behind the cervix, where pus usually collects, introduce your finger, explore the cavity, break up the delicate adhesions, if there be

any, and drain all fluctuating masses. Insert a T tube and irrigate daily. It is often astonishing how soon inflammatory exudates and masses will disappear. The principal thing is to avoid injury to the uterers. This route should be used more often by those doing pelvic surgery. It is far better than going in above and finding everything matted together with adhesions and many times long before the adhesions are broken up the pus sac is unavoidably ruptured and the danger to the patient is greatly increased. to say nothing about the suffering she will have to endure from the new adhesions that are sure to follow.

Furthermore, if the findings justify it or if you are not thoroughly satisfied you can immediately or at a later period, follow this small vaginal operation by an abdominal section and the risk will not be any greater to patient on account of the preceding vaginal operation. Abdominal section—Opening the abdomen, Trendelenburg's position and walling off the intestines, I will not describe because they are with slight changes, about the same with all surgeons.

First, I will take up the technic in removal of appendages where there are few or no complications. I would like to say it is much easier to do a radical operation than a conservative one. First, I will take up the tubes. Unless the tube is perfectly normal at uterine end, it is better to take it completely out, if you operate on it at all, including a small wedge shaped piece of uterus to prevent any possible chance for future trouble which sometimes takes place from stumps if left in. Begin at outer end and separate

tube from rest of broad ligament, without disturbing position of ovary or its blood supply. In stripping off the tube avoid injuring large vessels which lie very close to tube at uterine horn, ligate the small vessels with fine cat gut instead of in mass as is often done.

After removing tube and checking bleeding, the mesosalpinx should be whipped over with a running cat gut suture, to minimize adhesions, and placed loosely to prevent puckering of broad ligament. The important point is to leave the ovary in as good position and with the best blood supply possible. If these two points are observed, the cystic degeneration of ovary and other distressing symptoms will be averted and most of the secondary operations will not be necessary. If ovary is also badly degenerated or diseased and it is agreed by attending physician and surgeon that it is not safe to leave it in, proceed as follows:—

Tie off, with cat gut, the infundibulo-pelvic ligament between the ovary and the wall of the pelvis. Then ligate a small section of the broad ligament where it joins the uterus, close below but not including the tube, these two ligatures will control the blood supply. now seize tube and ovary and excise with a pair of scissors including entire tube and a wedged shaped piece of uterus with uterine end of tube, make your cut surface as much in shape of a V as possible. Close the cut surface in uterus with fine cat gut, then bring the V shaped cut in broad ligament together with fine cat gut, this will give support to uterus and minimize adhesions. If no pus or fluid sacs have been ruptured, abdomen may be closed and perfect recovery

ery expected. I will not describe taking out ovary without tube, as it is so simple.

In complicated and difficult cases, I shall mention a few points to be followed: Have your patient in Trendelenburg's position and the viscera carefully walled off as well as possible. One may be confronted by a pelvis thoroughly infected and with everything apparently matted together. Take hold of the fundus of the uterus with suitable forceps and elevate it as much as possible. Search for the points of least resistance, enlarge yielding pockets, keep fluids thoroughly sponged off, intestines packed away from field, any openings into bladder, intestines or uterus repair at once. Thus gradually the individual organs are isolated and after all bleeding has been checked the operation proceeds from this point as outlined above for uncomplicated cases. If there is much pus I prefer to drain both from Cul de Sac into vagina and through a stab wound just above pubes, with cigarette drain through this stab wound, extending deep down into the pelvis is all most pus cases need. This stab wound drain allows the incision to be closed tightly and practically prevents any chance of a hernia developing in the scar, especially if the abdominal wound is enclosed as follows.

It should be the aim of every surgeon to close the abdominal wound so that it will not give way in a short time and allow the bowels to escape

from the abdominal cavity, and by a method that will make the strongest abdominal wall possible. It is accepted by most surgeons that the aponeurosis of the external oblique is the supporting power of the abdominal wall, and that the strongest post-operative wall is obtained by closing the incision layer by layer, as follows:—Close the peritoneum with fine cat gut, continuous suture, double back and use same suture to whip together the muscle. On right side of wound separate the fascia from the muscle for about one to one and a half inches, on left side separate the fat from the fascia, the same distance, then the fascia will overlay nicely and allow the strongest union possible. Tension sutures are then introduced through skin about one inch from edge of wound on right side, passing through fat and fascia, then in and out through fascia on left side about one inch from edge, then back through fascia on right side, then out through fat and skin on left side. Silkworm gut is used for these sutures. They are an improvement on the old figure of eight sutures. They are placed about two inches or less apart. The ends are caught with forceps and allowed to rest until incision is closed. Now whip down the overlapping fascia with chromic gut and close skin with a continuous button-hole stitch. Lay a roll of gauze saturated with alcohol along line of incision and tie tension sutures fairly tight.

Practical Points in Railway Surgery, Including Aid Preparation for Transporting and Emergency Bags

Read before the 2nd Annual Meeting of the Railway Surgeons Association
of the Southwest, El Paso, Texas, October

By Dr. R. J. THOMPSON. Tucumcari, N. M.

The life of the railway surgeon is certainly one of various and exciting experiences, especially if he is located in a small town, and that is the man who usually goes face to face against the A. B. C. of it all. His conduct and equipment means a great deal for good or bad, both to humanity and the claim department. The Humane Society may not call one to account, but look out for the Claim Agent or Legal Department—should the case go to court.

Railroad wrecks are a peculiar thing, in that they almost always happen at an unexpected moment and the place—up in New Mexico—often means an open, cold, windy alkali flat, five to ten hours from a hospital.

The phone rings in the wee small hours of the night, or when one is out on the other side of the city, making a call, and the dispatcher says "No. 2. east bound, in ditch twenty miles west and several badly injured. No. 1 is here in the yard so we will run her equipment down to the wreck, and

doctor, we will be ready in ten minutes."

Railroad surgeon, young or old, does not that kind of message cause a few small chills to go creeping up your spine, and involuntarily a hand goes up into your hair, with the thought, is my equipment ready?

The other day in conversation with a doctor of excellent ability and railroad surgical experience, I made the remark that one should keep an emergency bag completely packed and ever ready for the emergency call; when to my surprise the doctor remarked that the train department always gives one notice in plenty of time to pack up—Is that right?—and will one pack up everything needed when laboring under the excitement of such a call?

I feel that it is absolutely necessary to have such a bag always ready, and wish to say that I believe it economy for the company to furnish such a bag, completely equipped, to each of its surgeons, and then there could be no

excuse for the local surgeon not having good clean outfit, and by so doing would cause the company only a small outlay.

Such a bag would be familiar to one and all company surgeons who might happen to come to the wreck. On several occasions at wrecks I have had doctors there (they were not railroad surgeons however) who had not enough equipment in their old dirty bags to dress a finger, and it seems a little hard to ask Mr. Local Surgeon to dig up \$25.00 or \$50.00 for a good emergency bag, when may be his salary amounts to only ten or fifteen dollars a month.

Such an emergency bag should be of large size, and made of heavy black leather, and should contain about the following: one hot water bottle, one fountain syringe, gauze bandages, package of cotton, one tourniquet, box of sodium chloride tablets, four-ounce bottle chloroform, bottle liquid soap, one hand brush, half dozen small sterile towels, 1-4 doz 1 yd. cartoon gauze, 2 oz. of some antiseptic ointment, 2 oz. bottle lysol or cresylone, box of boric acid crystales, 2 oz. tincture of iodine, two small enamel pans, pocket instrument case complete with ligatures and needles, salt solution needles, three or four extra hemostats, three sealed tubes of cat gut with needles, bottle antiseptic powder with sprinkle top, bottle bichloride tablets, one hypodermic case complete, one doz. paper napkins, two doz. safety pins, small bottle cocaine tablets, report blanks and small pocket memorandum book.

Along with this emergency bag and stretchers I feel that one should take along two or three blankets. Several

times I have had to handle injured men without sufficient cover, and such things brought out in court looks bad to the jury, besides the comfort to the patient.

Now suppose we arrive at the wreck where several have been reported injured—some are crying and groaning, others lying still—whom should we attend first? My policy has been to ask the conductor where his most seriously injured are, and proceed about as he directs (provided he has had time to look things over) but at all times first looking for those lying quiet, for they are usually bleeding or most seriously injured. The ones able to make a big fuss can wait a little.

I feel that many surgeons, under such circumstances as we find at railroad wrecks, try to do too much cleansing, stitching, probing of wounds and manipulation of fractures. In fact I figure the free use of a fresh tincture of iodine and moist dressing of boric acid solution, placing patient in comfortable, warm place, using small dose of morphine, heat and saline solution for shock.

I wish to condemn the seemingly common practice of filling a patient, suffering from shock, full of strychnine, nitro glycerine and large doses of morphine. Many local physicians are entirely too free in the use of heart stimulant with the hypodermic needle, and it's a too common practice for us to sanction the free use of whiskey in these cases.

Tourniquets are so often improperly applied too near the line of amputation, and thereby injuring the skin flap and causing the hospital surgeon to have to make a higher amputation than would otherwise be necessary. I be-

lieve we surgeons more often than we think apply our tourniquets unnecessarily tight as they are only intended for control of hemorrhage, and there is no need of constricting the entire circulation in many cases in order to control a small external bleeding vessel or two.

When I have an injured employee, suffering greatly from shock, and while waiting for him to react before placing him on the hospital operating table, I have considerable trouble in keeping his fellow employees from criticising us for being so slow, or often, should he die, they will say that the doctors did not try to save him. Local surgeons tell me that often they know it best to not operate under such "box car circumstances," but public opinion forces them to do it, and thereby nearly always increasing chances of infection over what it would be were they just to give a first aid dressing and transport patient to hospital. Most cases so operated by local surgeons are compelled to undergo a second operation after they reach the hospital, for various reasons well known to hospital surgeons. How are we surgeons going to overcome this public criticism? I favor that all division surgeons meet with our employees about once a month, teaching them first aid and explaining some of these points to them—too often old employees stand by with their hands in the air and let a brother employee lose that all precious fluid that the surgeon often wishes had been saved.

I favor the surgical department getting closer in touch with the men, and the first aid talks will help do it. Often one is called to treat an injured man who has been employed two or three

years, and does not know him, when if surgeon and patient were acquainted it would remove a certain amount of fear and cause the surgeon's work to be taken with more favor.

Large burns or scalds is another common injury to wreck victims. After caring for shock and pain I favor a gentle cleansing of the wound with a weak salt solution, boric acid solution, or bicarbonate of soda solution, and then applying a wet packed dressing of gauze, of the same solution and keep it there during transportation to hospital. I believe the rather common oily or grease first aid dressing in burns to be absolutely wrong, for no hospital surgeon can as easily and thoroughly make such cases aseptic after he gets them as can be done after the first aid wet dressing.

Many employees seem to feel that railroad surgeons are at all times looking more after company interests than the interest of the employees, and such a feeling should not exist. Never have I had a chief surgeon or claim agent ask for anything other than what was fair for both employee and company, and the employees should be made to feel that way about it.

The making of accident reports at wrecks has always been a bug-a-boo for me. So often the conductor has questioned and completed his reports with all of them, and then I go after my report, and in a few hours the hospital surgeon comes out with his little stock of papers and usual questions for his reports. Then is it no wonder that the injured begin to feel at about this time that possibly the company is trying to take an unfair legal advantage of them, and that the medical department is so assisting the company

in obtaining this undue advantage, and thereby our department losing some respect of our patient, which we would otherwise have.

I believe the order of getting these reports at wrecks should be for the conductor to see all those not injured, and make his written report and let those who are injured alone, so far as reports are concerned, and let the surgeon make them, conductor and surgeon comparing reports to see that they have one report for each passenger on train. It's always my plan to work the entire train, questioning each passenger and looking after all claims of injury, no matter how small.

Just a word about the relative work of the local, division and chief surgeons of the Southwest as we have it today. The local surgeons include many of our best men, but I feel that we should have a traveling surgeon or require the division surgeon to visit all injury cases on his division at the time of injury, working with the local man, or soon after the injury even though the local man reports an unimportant case, for many employees will not go to hospital, even though local man so advises, and often small infected wounds, after a few days, become rather serious ones, and the local man, it may be, has reported said case as of no importance, and now after conditions change, he rather dislikes to change his prognosis and send man to hospital, whereas at about this time should the traveling or division surgeon happen to make his call he could

assist in getting the case lined up in the proper manner, and thereby lift a great deal of responsibility from the local surgeon.

I believe the local man often feels that he shoulders responsibilities in the handling of many cases that should be divided up with the division or chief surgeon, and I believe that an active division or traveling surgeon, with a happy smile and a little tact, would be welcome at any of our offices at any time.

Gentlemen, I believe I have about reached my time limit as set forth in the program, and I wish to briefly sum up the points I trust that I have brought out in this paper

No. 1. That the company furnish its surgeons a good, well filled emergency bag, and it be always packed ready for railroad duty.

No. 2. That one signed written report taken on the field is sufficient, whether made by either conductor or surgeon.

No. 3. First aid wreck work should be limited, both surgically and medically, and viz.: stop hemorrhage as above suggested, and use mostly iodine and wet dressing, leaving wounds open, and treat shock with heat, small doses of morphine and saline solution.

No. 4. That division surgeon give regular monthly talk to employees on first aid, and by such talks keep on a friendly feeling.

No. 5. That first aid dressing of burns and scalds be free from oils and grease.

No. 6. That we should have a traveling surgeon or extend the work of the division surgeon.

Enlarged Tonsils and Why They Should Be Removed

Read before the 2nd Annual Meeting of the Railway Surgeon's Association of the Southwest, El Paso, Texas, October.

By H. T. Bailey, M. D., Courtland, Arizona.

The faucial tonsils or amygdalae, are two glandular organs, situated one on either side of the fauces between the anterior and posterior pillars of the soft palate. When normal they are rounded, redish masses of glandular tissue. On the inner surface open twelve to fifteen orifices leading into smaller recesses from which numerous follicles branch out into the substance of the gland.

These follicles are lined by a continuation of the mucous membrane of the pharynx, covered with epithelium. Around each follicle, imbedded in the submucous tissue, is a layer of closed capsules; which are analogous to Pyer's glands, consisting of adenoid tissue. They contain a thick grayish secretion, but have no opening leading into the follicles. Surrounding each follicle is a close plexus of lymphatic vessels. From the plexuses the lymphatics pass to the cervical glands, mostly to the deep cervical glands.

The principal blood supply is from the tonsillar artery, a branch of the facial

The veins terminate in a plexus on the outer side of the tonsil.

A condition of hypertrophy of the tonsil is recognized as chronic enlargement of the tonsil, and may be unilateral or bilateral.

The hypertrophy of the tonsil varies from a very slight enlargement to a size that almost touches on their inner surface when swallowing or on depressing the tongue, and at times extends down almost to the epiglottis.

Three forms of hypertrophy are recognized.

First. True hypertrophy, in which all the elements of the tonsil are enlarged. The lymphoid nodules are particularly affected. In this class the tonsil stands out as a large pinkish, redish mass and is soft to the touch.

Second. Hyperplasia, or sclerosis, in which the stroma or connective tissue frame work of the tonsil is increased. As the process advances the blood vessels and lymphoid nodules are diminished in size. The tonsil, instead of being pink and soft as in the true hypertrophy, is pale as to color, and

firm and unyielding to the touch.

Third. The lacunar, or "honey-combed," tonsil. Here the crypts become enlarged from being distended by accumulations of epithelial cells, leucocytes and debris. These crypts are sometimes found to communicate with each other. This may be due to absorption of the interstitial walls from pressure necrosis, or to a caseous degeneration of the lymphoid nodules, leaving cystic cavities where true parenchyma once existed. At first the lacunar variety is swollen, the crypts being filled with an ivory colored concretion.

Another classification is pedunculated, hooded or submerged and multilobular. This I will comment on only to say, that the cervical lymphatic glands are enlarged more in the hooded than in the other classes.

Etiology. It seems to be agreed that the chief predisposing causes for enlarged tonsils are the lymphatic habit, and the strumous, or lithemic diathesis.

An enlarged tonsil is a local expression of an acquired or inherited faulty metabolism.

Tonsils are both excretory and secretory glands, and any alteration in function may lead to hypertrophy.

The exciting causes are scarlet fever, diphtheria, measles, small pox, rarified air of high altitudes and local inflammations, as follicular tonsillitis.

Reasons for Removing

First. Foreign bodies lodge in the throat more easily.

Second. The muscles of deglutition are hampered in their action. The patients drink too much liquids with their food.

Third. The enlarged tonsils predis-

pose to hyperemia of the larynx, causing a husky, toneless and easily fatigued voice.

Fourth. The action of the tensor palati and tensor tympani is impaired and as these muscles, to a great extent, control the patency of the eustachian tube, the tympanum is not aerated; thus catarrh of the tube and middle ear follows. This catarrhal tissue is more easily infected and breaks down more easily; and in this way otitis media may be traced, in many cases, to hypertrophied tonsils. Sometimes we see lymphoid masses growing over the orifices of the eustachian tubes, which develop ear symptoms. I have had two such cases; one operated on August 29th, 1908, other May 23rd, 1911. The symptoms in both cases cleared up soon after the operation. The first patient complained of deafness at times; the second had a cracking or "popping noise," as she expressed it, in the ear at intervals.

These two patients alone show how a railway employee might be mistaken in sounds. Therefore I believe it is necessary for all railway surgeons to make a careful examination for enlarged tonsils, and adenoid masses in the naso-pharynx and especially about the mouths of the eustachian tubes.

Fifth. The enlarged tonsils predispose to enlarged pharyngeal, lingual and nasal lymphoid masses. The patient has all the symptoms of adenoids; as partial loss of taste and smell, snoring in the sleep, dull expression of face, anorexia and pigeon breast.

Sixth. The secretion of the normal mucous glands are destroyed by the hypertrophic and atrophic conditions.

Seventh. Enlarged tonsils cause rheumatism, endocarditis and tubercu-

losis. Most physicians have had rheumatic affections to follow attacks of acute tonsillitis. I have had patients, with first a follicular tonsillitis, then articular rheumatism, followed by a valvular murmur. Hunner of Baltimore proved that the rheumatic urethritis and ureteritis was due to enlarged tonsils.

Sewell of San Francisco has proven, not only by his own experiments but by those of Wood and others, that hypertrophied tonsils predispose to tuberculosis. Yet we have surgeons who want to remove the tubercular cervical glands and leave the diseased tonsil, often the seat of the infection.

Eighth. They predispose to quinsy, or peritonsillar abscess. These enlarged glands, with their deep recesses and follicles filled with dead epithelial cells, leucocytes and debris, are artificial culture tubes for staphylococci, streptococci and other pus producing organisms. These bacilli pass either directly or by the lymphatics into the peritonsillar tissue where the abscess is formed.

Ninth. They produce auto intoxication. The cystic degeneration and other degenerative processes with pus formation and with faulty metabolism, our patient has all the symptoms of auto intoxication; as, headache, sallow complexion, fetid breath, mental de-

pression, vertigo, to jaundice, gout, rheumatism and chronic inflammation of kidneys.

Now when we consider these degenerative processes and deep follicles filled with pathogenic bacteria, can we doubt an auto intoxication. And if we have toxins and bacteria to eliminate, a very great number will be eliminated by the kidneys. Soon the opsonic index will be lowered, anemia will be produced and nephritis will follow. Brewer of New York has shown that when considerable quantities of bacteria and toxins pass through the kidneys when the patient is anemic or when his resistance is lowered a nephritis develops.

We have nephritis here for the same reason that we do after diphtheria and scarlet fever, and that is because of the passage of bacteria and toxins through the kidney when the opsonic index is lowered.

In closing, I would suggest that hypertrophy of the tonsils alone might disqualify one from becoming a railway employee for the many reasons mentioned above; but especially because they predispose to acute attacks of tonsillitis, to quinsy, to impaired hearing, to tuberculosis, to auto intoxication, and last but not least to chronic nephritis.

BOOK REVIEW

Review of some of the Recent Advances in Tropical Medicine, Hygiene, etc., Supplement to Third Report of the Wellcome Research Laboratories at the Gordon Memorial College, Khartoum, Egypt. (1908).

By Andrew Balfour and R. G. Archibald, 238 pages. Published for Sudan Government by Balliere, Tindall and Cox, London.

Second Review in Tropical Medicine etc., Supplement to Fourth Report. (1911). by Andrew Balfour, R. G. Archibald, W. P. Fry, and W. R. O'Farrell, 416 pages. Balliere, Tindall & Cox, London. Togo Publishing Company, New York.

These two books form a thorough review of recent work in tropical medicine all over the world and are by well recognized authorities. The subject matter is arranged alphabetically and is very convenient for reference work. They will form a valuable addition to the library of one interested in tropical diseases.

E. C. Prentiss

C. V. Mosby and Company announce the publication about April 15th, of Roberts' Pellagra. This work will be an exhaustive treatise of the disease and well illustrated and brought up-to-date.

PELLAGRA

Pellagra. By George M. Niles, M. D., professor of Gastro-enterology and Therapeutics in the Atlanta School of Medicine, Atlanta, Georgia. Octavo of 253 pages, illustrated Philadelphia

and London: W. B. Saunders Company, 1912 Cloth, \$3.00 net.

W. B. SAUNDERS COMPANY

Philadelphia

London

Niles' book on Pellagra is a timely work on a most important subject. Pellagra bids fair to becoming the great American problem, inasmuch as thirty four states and the District of Columbia have acknowledged its presence.

The author, after reference to the history of the disease both in the United States and in other countries, enters into a discussion of its etiology, giving a fair and unbiased discussion of the various theories as to the source of the disease, tending himself to a belief in Lombroso's theory: In pellagra, we are dealing with an intoxication produced by poisons developed in spoiled corn through the action of certain micro-organisms in themselves harmless to man.

Chapters are devoted to the symptomatology of the disease while a feature of the book is the chapter detailing clinical cases from various sources. Pathology and prognosis are fully discussed as are also the differential diagnosis and the different methods of treatment.

We commend this book to our readers but particularly to the profession in New Mexico do we offer the advice to purchase and study. Three cases of

pellagra are known to have occurred in New Mexico, two of these are referred to in the work under discussion in a table on page thirty-one and the third, as yet unreported, having recently come under the observation of the reviewer.

As said above the work is timely; it does not profess to solve the problem but is offered as a contribution to the 'sum total of our knowledge concerning pellagra, this American problem.'"

The New Mexico Medical Journal

Volume VIII

MAY, 1912

No. 2

E · D · I · T · O · R · I · A · L

The New Mexico Medical Journal is not responsible for the opinions expressed by any of its contributors.

DOCTOR WILEY.

Doctor Wiley has resigned. The inevitable has happened. In this connection we clip the following from a recent issue of the Journal of the American Medical Association:

There are two groups of people who are anxiously watching and waiting to see who will be Dr. Wiley's successor. In one group are the dishonest manufacturers, the food adulterators, the whisky blenders, and the fraudulent patent medicine promoters: Those "interests" that are preying on the people through fraud and misrepresentation in various ways. In the other group are the people of the United States, and the honest manufacturers. Which of these groups will be kept in mind in the selection of the man? The newspapers announce that President Taft immediately telegraphed to the leading universities asking for suggestions as to the right man to succeed Wiley. This looks as though the President were anxious to get the right man. But the right man in this case need not necessarily be the best chem-

ist in the country. What is needed is a man who is fundamentally honest; who has the good of the public and not of the "interests" at heart; one, above all, who has honest convictions and has courage to carry out such convictions. But will the President dare to ask such a man to take a position in which he will be surrounded with the restrictions that made Wiley consider it nearly useless? No self-respecting man, who is thoroughly qualified in every way for the position, would accept it under present conditions. There must be a further change in the personnel of the bureau which is by law presumed to enforce the Food and Drug Act and a removal of the restrictions on its activities. Until that change is made, no one worthy to succeed Wiley ought to be expected to accept the position.

From Vol. 7, No. 3 of the American Medical Association Bulletin we are pleased to quote as follows:

THE EDUCATIONAL WORK OF THE ASSOCIATION.

The importance of the public education on medical subjects as a necessary

forerunner of reforms in public health legislation has long been recognized. Like many of the other present lines of work of the Association, however, recognition of the need for action was for many years the limit of the activities of the Association and of the profession. All through the proceedings of the Association, from 1847 down to the present time, are found frequent references to the imperative need of enlightening the public on the aims and purposes of the medical profession, in order to secure public support in reducing sickness and exterminating preventable diseases. The necessity for such work has always been recognized, just as it was recognized for many years that the Association should investigate and censor medicinal preparations, investigate medical colleges and publish an official directory. But none of these things was done because the Association lacked the funds necessary to finance such work. Lacking the money, competent men could not afford to devote their whole time to these activities. As a result, the first fifty years of the Association's existence were largely devoted to discussion of plans which are now for the first time being carried into effect.

Following the reorganization of the Association in 1901, which action came as a result of the growth of *The Journal* and the improved financial condition of the Association, the question of the education of the public on hygienic and sanitary matters assumed a new aspect. For several years it was necessarily shoved into the background on account of the relative importance of other matters. The simultaneous growth of the Association and of *The Journal*; the enormous

work of reorganization, which made necessary a practical reconstruction of every county and state society; the organization of the Council on Pharmacy and Chemistry, with the terrific fight against nostrums and quackery and the vicious and persistent attack of the Association on the profession which resulted therefrom; the organization of the Council on Medical Education; the compilation and publication of two editions of the directory and the enormous increase in the routine work of the Association—all these things fully occupied the time and attention of the executive officers of the Association. But as early as 1905, at the Portland meeting of the Association, the question of the education of the public was taken up. At this session the Section on Obstetrics and Diseases of Women presented a resolution to the House of Delegates asking for the appointment of a committee to investigate the increase in cases of uterine cancer, with a view to preparing material for the public on the importance of early diagnosis and treatment in order to reduce the mortality from this cause. This committee reported at the 1906 session of the Association at Boston, presenting a synopsis of a plan for the organization of a board on public instruction. The president was authorized to appoint a committee of seven to form such board. At the next session, at Atlantic City in 1907, this board made its first report, recommending (1) the publication of suitable material in the public press, (2) the distribution of pamphlets to the public, (3) the organization of public lecture courses, and (4) the dissemination by circular letters of matters of general moment to the medical profession. For a num-

ber of reasons, the work of this board did not develop satisfactorily along practical lines. In the meantime a considerable number of other committees had been established with overlapping or similar functions. The Committee on Medical Legislation, which had been in existence for years, found its work closely related to that of public education. The necessity for combining these various activities under a single head became more evident each year. At the Atlantic City session in 1909 it was proposed to combine all of these boards and committees into a single, permanent Council charged with the entire work of public health, public instruction, and legislation.

Accordingly, at the St. Louis session in 1910, the Council on Health and Public Instruction was created. Under it, from time to time, had been placed various committees and activities for the purpose of cooperation. Although established at the St. Louis session in June of 1910, the Council was not organized and equipped for work until the meeting of the Trustees in October. The Council is, therefore, but a little more than a year old. Its work has already developed so as to cover a very wide field, and its future possibilities are almost unlimited."

The only hope of the future lies in education. More knowledge on health matters must mean greater efficiency, comfort and enjoyment for each individual. Public health is now recognized to be a question not of individual interest alone, but of public and collective importance. The city or the state in the future which permits its citizens of any age to sicken or die from preventable diseases will no longer be regarded as civilized. Ignorance, filth,

disorder and disease must disappear as the people know and understand their causes and means of prevention. In this work the organized medical profession must assume an active part. The Council on Health and Public Instruction of the American Medical Association is the body which has been established to represent the medical profession in this work, in the accomplishment of which it asks the support of all right minded citizens."

MIDWIVES AND BLINDNESS .

Under the above title there appears in the April number of the Illinois Medical Journal an article by Caroline Hedger, M. D.

From a table given in this article we learn that New Mexico heads the list in the number of blind to 100,000 population, the proportion being 230.4 white and 291 other races; that is to say that out of every 100,000 of our white population we have 230.4 blind while among the others of our population there are 291 blind out of every 100,000.

At least one-third, perhaps one-half of these cases are due to ophthalmia neonatorum, the greater portion of these being gonorrhoeal.

Cannot something be done to prevent this?

In our March issue we called attention to this condition and recommended action by our present legislature. We emphasize at this time, the necessity for immediate action .

Let us be up and doing. A bill should be prepared by our legislative committee along the lines suggested by the American Medical Association Committee on Ophthalmia and

Presented to the New Mexico legislature.

The recommendations of the committee on ophthalmia of the American Medical Association, concurred in by the Public Health Association are as follows:

1. To secure laws requiring registration of births.

Midwives to be examined and registered in each county.

Midwives must report ophthalmia.

2. Health Boards shall educate as to dangers of ophthalmia, methods of infection, and prevention.

3. Distribution by Health Boards of supply of chosen prophylactic and explicit direction for use.

4. Records should be kept in institutions.

(a) Number of cases of ophthalmia.

(b) Treatment.

(c) Results that occur as well as blindness.

5. Reports periodically from doctors of the same.

A PAPER, PLEASE!

Will you write a paper for the Roswell session of the New Mexico Medical Society?

If each member who intends to attend the Roswell meeting of the New Mexico Medical Society—the 1912 meeting—will write a paper, a most interesting program can be promised.

Secretaries of county societies are urged to see that their respective societies are represented by at least one paper on the program.

The one hundred and fourteenth annual meeting of the Medical and

Chirurgical Faculty of Maryland was held at Baltimore April 23rd, 24th and 25th, 1912.

THE FIFTEENTH INTERNATIONAL CONGRESS ON HYGIENE AND DEMOGRAPHY

The Fifteenth International Congress on Hygiene and Demography will meet in the United States in response to an invitation, extended by the President, in pursuance of an Act of Congress, approved February 26, 1907. The invitation was presented by the American delegates to the Fourteenth International Congress on Hygiene and Demography, meeting in Berlin in September, 1907, and was accepted.

In April, 1909, the Department of State created a Committee of Organization, and in May, 1909, appointed a President of the Congress, Presidents of the nine Sections of the Congress, and a Secretary-General.

Under date of May 16, the Department of State addressed invitations, through the American Ministers and Ambassadors, to all foreign governments, announcing September 26, 1910, as the opening date. Later it was found impossible to make adequate preparations in so short a time, and Congress authorized postponement until 1911 or 1912. (*Public Resolution No. 13, approved February 3, 1910.*) In April, 1910, the Department of State sent out circulars announcing the change of date, and subsequently the Department approved the date September 23-28, 1912, as the time of meeting.

Acceptances of the invitation have been received from 24 countries, including the Dominion of Canada.

Congress has also authorized the

President of the United States to extend an invitation to the several States of the United States (*Public Resolution No. 12, approved January 24, 1910*). The Department of State sent out this invitation under date of February 4, 1911.

"A Prominent American asks for proofs that International Congresses on Hygiene and Demography are useful to the countries in which they are held.

The Third Congress, Paris, 1878, dealt largely with the sanitation of hospitals and of cities. Important reforms followed, and the beneficial results, continuing to this time, were most conspicuous in Paris.

The Fourth Congress met at Turin, and the history of municipal hygiene in Italy dates from that Congress. Its effects soon became apparent in the declining death rate of Italian cities.

The Fifth Congress, Geneva, 1882, led to the foundation of the Federal Bureau of Health of Switzerland, and to improved sanitary organization in the Cantons.

The Sixth Congress, the Hague, 1884, started a program of hygiene for the Dutch Colonies, and this is the first chapter in colonial hygiene.

The Seventh Congress, Vienna, 1887, led to the demolition of Vienna's over-crowded tenements, the construction of healthy dwellings, the introduction of pure water supply, and eventually to the complete transformation of the city.

The Ninth Congress, London, 1891, opened an era of legislation for the health of wage-earners, and, in this respect, England still holds leadership.

The Eleventh Congress, Madrid, 1898, through meeting at an inauspici-

ous time for Spain, greatly assisted Spanish hygienists in their efforts to improve the sanitary organization of that country.

Dr. A. J. Martin (Paris, 1900), says: "In every case a session of the International Congress on Hygiene and Demography has been attended by definite and permanent sanitary improvements in the country in which it has been held."

STATE COMMITTEE:

NEW MEXICO

Dr. James J. Shuler, Raton.

Dr. John W. Elder, Albuquerque,

Dr. George E. Bushnell, Fort Bayard

Dr. Robert E. McBride, Las Cruces.

Mr. G. T. Veal, Roswell.

Membership.

Any person who is interested in the study or practice of hygiene or demography may become a member of the Congress, entitled to take part in the proceedings, and to receive the published transactions, on payment of the membership fee of five dollars (\$5.00)

In the April number of Pearson's Magazine there appears an article by Dr. Charles A. L. Reed relative to the evil of few splitting. Commenting on this article the El Paso, Texas, Medical Society Bulletin says:

"Dr. Charles A. L. Reed has an article in the April number of Pearson's Magazine that should be read by every physician. The abuses to which he calls attention seem rather appalling at first thought, but when critically considered are not so many nor so bad as might be imagined. Real, innate criminals there are in the medical ranks, but the healing art enjoys comparative freedom from such as much so as does the ministry. The

other evils complained of are largely but the conscious or subconscious expressions of the ways and means of meeting the lack of appreciation and injustice of the public in some of its dealings with medical men.

The doctor works for wages. If he had the advantage of the union, like other laborers, he might compel attention to his just demands. Fee-splitting is but a crude way of getting that justice which is otherwise denied him in certain instances. The surgeon recognizes the unfair position in which the regular attendant is placed. It sounds very well to say that the medical man should demand proper compensation for his services. A demand without means of enforcing it amounts to nothing. Really, the doctor is more sinned against than he sins. No men are called upon more constantly to decide the question of right and wrong than are physicians. The doctor's ideas of ethics are probably quite as high as those of the public with whom he deals. In fact, many of his clientele have no comprehension of right and wrong whatever, and this is the source of a good deal of the mischief.

It is a popular theme today to tell what people have suffered at the hands of physicians, but what physicians have suffered at the hands of the public would be a revelation to many. It would be a story of overwork and underpay, or no pay; of faithful service met by lack of appreciation, desertion and defamation; of work for the public good met by opposition and even persecution. If the public has been badly treated, it has none but itself to blame. It is all right to preach ethics

for the doctor, but it always has been rather a hardship for him to be ethical with the public while in many instances this same public has not known even the meaning of the word. It is very true that "the question of the hour is that of ethical quickening, ethical regeneration, not alone in the medical profession, but in other professions and *in society in general*."

Yes, let all the motley throng with whom the physician has to deal study ethics, the butcher, the baker and the candle-stick-maker; the banker, the merchant and the broker; the miner, the farmer and the laborer; the real estate agent and the insurance agent; the woman in the street, the horse-race man and the gambler; rich and poor; saint and sinner—let them all study ethics and practice it, and then we will hear no more of the shortcomings of the doctor, for he will get a square deal and his naturally generous nature can be depended upon to do right if only he be given half a chance.

That wrong exists is undeniable. That is must be righted no one will question. "The just thing alone can survive." But the public must save itself. It has always been prone to follow false prophets. Witness the opposition to vaccination, to vivisection and laws designed to protect the public health by the punishment of quacks. The dear public loves to play with the fire. The physician has long protested in vain, but his counsel has been ignored. The very things complained of he has warned the public against, but his voice has been as of one crying in the wilderness."

THE STATUS OF BILLS LEGALLY COLLECTIBLE.

After the services of a physician have been rendered, it becomes an important matter to determine whether or not he will be able to collect the full amount of his bill. A long list of patients may be a source of pride, but there is considerable difference between having a large amount charged up and collecting the same. The art of procrastination seems to be highly developed in the medical fraternity. Bills are frequently put off for months and sometimes years at a time, while by a little business sense and the devotion of a short time each month sufficient money will be taken in to go far toward paying the rent and gasoline bills. The doctor need not be the victim of careless or negligent book-keeping. It does seem a pity that a man who works so hard and devotes himself so assiduously to his patients should so often be denied his just compensation.

What then should the doctor do to be sure of receiving his well earned money?

One of the first prerequisites to collecting an account is that the physician should be legally qualified to practice, otherwise he has no standing in court. The requirements to practice medicine vary in the different States, but practically all of them include a licensing of the physician after passing a preliminary examination; and in New York State, before being allowed to take the medical course, the preliminary regents' requirements must be satisfied. The young practitioner, however, should remember that if he does any work before registering his license with the county clerk in the county in which

he practices he will have no legal hold upon his patient for services rendered. The license should be filed at the earliest opportunity.

It is readily seen that one practicing without a license is doing an unlawful thing, and a contract for the doing of an illegal thing is void in its inception. Even the charge for medicine furnished cannot be recovered.

Having the right to compensation, the first thing to do is to send a demand for payment in the shape of a bill for services rendered. It is well to remember that while the usual practice seems to be to render the account for a lump sum, the more rational plan is to itemize the different charges.

The first bill having been sent without response from the patient, it is well to wait for about three months and then send another bill. If no attention is paid to the second statement, the amount in the bill is conceded by the patient as being a proper charge and becomes what is known in law as an account stated, *i. e.*, it cannot be disputed at the trial. It is perfectly proper, however, to raise the amount of a bill in an action where the increased charge can be shown to be a reasonable value for such services.

An important question to be answered before beginning suit is the age of the claim. In New York and most of the States the period of the Statute of Limitation is six years, and an action must be begun before the lapse of that period to establish a right to a recovery if the patient sets up this statute as a defense. Therefore it is unwise to allow bills to go for this length of time if you wish to recover through recourse of law.

On the trial the practitioner must prove:

1st—The employment by the person sued.

2d—The performance of services with a reasonable degree of care and skill.

3d—The value of the services, either determined by the terms of an express contract or the reasonable worth and value of the services, as determined by the evidence of other physicians.

In the proof of the value of the services it is highly important that the doctor should present proper books of account in which the various visits and calls are distinctly set forth.

In New York, a physician's books of account are admissible as primary evidence if they comply with what is called the shop book rule first laid down in the case of *Vosburg vs. Thayer*, 12 Johnson 461. Under this rule he must show that they are his regular books of account; that he kept no clerk who was familiar with his business and would be competent to testify regarding the facts stated in the books; that some of the work or services were performed; and that he kept correct accounts.

It has been held that a physician's wife is not a clerk within the meaning of the rule, but it would seem that an office nurse such as many practitioners have and who keeps the books and is familiar with the doctor's work would be a clerk, and that in this case the books would be inadmissible and the account would have to be proved by the attendant.

As to the correct accounts, proof must be made by other patients who have settled bills by his books.

Where a doctor jots down the calls

and then transfers them to his ledger from the slip, it is held that the ledger is the proper book and may be produced in evidence.

Now, as to what the books should contain it is plain that they must not contain anything which would bring them under the protection of the statute in regard to privileged communications.

It is best, therefore, to put down the visit or call under the appropriate date, the member of the family treated, and whether an operation or some treatment outside the ordinary visit is given, but not to put down any information obtained in professional intercourse which was necessary to enable the doctor to treat the patient nor the character of the treatment.

While a physician is perfectly competent to testify as to the value of his services, it is the proper course to have one or more other physicians recognized as of good standing in the profession and of known integrity and who will be able to overcome any defense that patient may put in as to the small value which should be placed on the doctor's services.

A jury is bound to take into consideration the estimate placed on the value of services by men who are experts, therefore there exists the importance of having reliable witnesses.

The defense of drunkenness to an action for the collection of a bill is a valid one and the physician cannot recover, unless the patient continues to employ him, in which case the patient waives his objection and cannot plead such a defense.

When a claim for services is against an estate, it is well for the medical man to promptly send his account to

the executor or administrator. In some States the debt is a preferred one, that is, is payable before the ordinary debts. If the executor or administrator reject the claim, wholly or in part, the physician must bring an action within a definite period varying in the several States, or have it rejected.

It is of vital importance then to the medical income, that the physician becomes properly qualified, that he keeps proper books of account, that he renders his bills promptly, and that, if they are not paid promptly, legal action be instituted before the Statute of Limitation takes effect.

(Medical Review of Reviews, April 1912).

The American Proctologic society will hold its Fourteenth Annual Meeting Atlantic City, N. J., June 3 and 4, 1912.

The official call for the 63rd Annual meeting of the A. M. A. has been issued. It follows:

Official call to the Officers and Members of the Constituent Associations of the American Medical Association. The sixty-third annual session of the American Medical Association will be held on Tuesday, Wednesday, Thursday and Friday, June fourth, fifth, sixth, and seventh, nineteen hundred and twelve at Atlantic City, New Jersey.

The House of Delegates will convene at ten A. M., Monday June third nineteen hundred and twelve at Atlantic City New Jersey.

John B. Murphy, President
Alexander R. Craig, Secretary.
Chicago, Illinois,
April tenth, 1921.

The latest bulletin of the State Board of Health of Kentucky deals with Anemia or Hookworm in Kentucky.

The Bulletin shows the distribution of this disease in Kentucky and shows how it can be prevented and cured.

The article is carefully written, well illustrated and ought to be of value to the physicians in the territory in which it circulates.

NOTES.

The Occidental Life Insurance Company of Albuquerque has issued a pamphlet to its medical examiners entitled "Medical Examiner and His Problems," for the purpose of making clear to all examiners the relation existing between Companies for whom they examine and the examiners themselves, as is expressed in the preface.

Most of it is taken from the work of Doctor C. L. Green on "Life Insurance Examinations," to whom proper credit is given.

**NEXT MEETING NEW MEXICO
MEDICAL SOCIETY, ROSWELL.
SEPTEMBER 12TH, 13TH AND
14TH, 1912.**

Altitude and Blood Pressure, Especially In Pulmonary Tuberculosis

By J. L. Pomeroy, M. D., Monrovia, Calif.*

My attention has recently been called to an article in the December, 1911, New Mexico Medical Journal, in which Peters and Bullock answer my criticism of their blood pressure work on pulmonary cases. Owing to certain broad statements made by them, in self defense an answer is necessary.

In their original paper, observations of systolic arterial pressure were given upon 100 consumptives living at an altitude of 6000 feet. I devoted considerable time to an analysis ("an attempted analysis," according to their recent communication), of their tables for the following reasons. First, no references whatever were given concerning the measurements of arterial tension upon normal people living at high altitudes; yet they made the statement "The results of the blood pressure observations in our cases, far from being indicative of tuberculosis, would signify almost perfect health." Furthermore Gardiner and Hoagland at the same altitude state "Fifty men who had lived at least twenty-five years at 6000 feet and others longer, showed a lower pressure than at sea level." Schnider and Hedblom (whose work they disregard) gave the actual readings upon two men who had remained at high altitude for a long period, showing a pronounced fall in systolic tension. The general results of my

search of the literature made their (Peters and Bullock's) conclusions appear unusual. It was therefore only natural to investigate the subject further.

Secondly, in the estimation of averages of blood pressure readings, the groups of cases were in many instances too small to allow the introduction of cases showing very large gains. One has only to refer to my original paper (I) to see this clearly.

Thirdly, they stated that "Gonorrhea, syphilis, diphtheria and typhoid fever have no influence on blood pressure." In opposition to this, particularly in the latter disease I quoted Thayer's work done on 4000 cases at Johns Hopkins' Hospital in which he very definitely proved that in post-typhoid cases there was marked change in the arteries, which could only result in an increase in arterial tension. It furthermore stands to reason that syphilis does definitely have a close relation to arterial tension—particularly to arterial hypertension and arterio-sclerosis.

Fourthly, I concluded that *one could not compare blood pressure readings in cases of pulmonary tuberculosis upon the basis of the national classification*, which was the basis of their comparisons. Comparisons could only be made on the basis of toxemia, and

*(An answer to Peters and Bullock's article in Dec. 1911 issue.)

no one has yet satisfactorily devised such a definitive method. It was upon the basis of these reasons that I analyzed Peters and Bullocks paper. Nor can it be stated by anyone who thoughtfully reads my paper, that I made any reference to "a wilful juggling of tables," which in their answer in the December Journal they intimate was my accusation. I have studied arterial tension during a period of ten years, and became interested in the subject while an intern in Dr. Theodore Jane-way's ward in New York City, therefore I believe that I have some basis of personal experience whereon to judge work on the question of merit not on personalities.

I reiterate that it did not seem from Peters and Bullock's first paper that their results could be taken as conclusive, in the face of negative evidence, which was not introduced in their original communication. In their December 1911 communication they state "From observations made here on normal individuals we find the average to be 142 mm. again showing the effects of altitude on healthy people." I ask what age period does this apply to, and how was such an average obtained? Again I feel that a pressure of 142 mm. for an average, is very high even for an altitude. Personally I should rather carry a little less if one has to look forward to the usual rise towards senescence.

This question is not by any means settled, and I await with interest my esteemed colleagues' forthcoming arti-

cle. In the meantime please give me the histories of the normal people in Silver City who average 142 mm. Hg.

If Silver City is as I judge it is, like most health resort towns, it would be hard to find enough old residents who could be considered normal people to make any such study as is suggested.

(I) Relation between Blood Pressure and Barometric Pressure, especially in Pulmonary Tuberculosis. Interstate Medical Journal, Vol. XVIII., No. 7, 1911.

The above article was submitted to Drs. Peters and Bullock who reply as follows:

"It is not our desire to enter into a blood pressure controversy with Doctor Pomeroy. We felt that in the December Journal we answered the criticisms he made in his former article. However, we did not have the table of six hundred cases to substantiate our claim. This table, together with an article, is now in preparation and will be published sometime this summer. In our opinion, we feel that we have justified our claims by a sufficient number of cases to make the statements acceptable to any fair minded man. We shall be glad to furnish the New Mexico Journal with a reprint of this article for review and also shall be pleased to send a copy to Doctor Pomeroy. If the Doctor is not then convinced we extend to him an invitation to visit our institution and take blood pressure readings with us."

Drs. Peters and Bullock.

Trachoma

Frank E. Tull, M. D., Albuquerque, N. M.

Read Before the 30th Annual Session of the New Mexico Medical Society,
East Las Vegas, N. M., September 6—9, 1911.

Owing to the recent reports of the prevalence of trachoma among the inhabitants of New Mexico and especially among the Indians, I have chosen this subject as it should be of interest to the medical profession and the public in general.

According to a published report in our local paper headed "DEADLY TRACHOMA PREVALENT AT SANTA FE", under date of April 19th, 1911, giving statistics of the disease in the Public Schools in our capital city, the article is as follows. "Santa Fe is the most infected town with Trachoma in the country.

"That is the inevitable conclusion from statistics given out by Dr. Dunn, the specialist Expert on the disease who has been sent to the Southwest by the Bureau of Indian Affairs to stamp out the disease in this country and especially among the Indians.

"Of the pupils examined in the second ward school on the south side 100% have trachoma. In the High School of 184 pupils, examined yesterday, eliminating all doubtful cases, 80% have trachoma; out of 139 pupils examined today, 90% have trachoma."

This report brought out a vigorous protest from the physicians and citizens of Santa Fe as misleading and unreliable.

I have been furnished statistics by Government Physicians elsewhere in New Mexico and in no locality have they reported over 50% even of the Indians subjects of trachoma.

The U. S. Indian School of Albuquerque, Dr. Keck, Physician in charge, reports that possibly 20% of the children representing the various Pueblos, have had trachoma but not over 2% at the present time are in the active stage of the disease.

He also reports from the various Pueblos as follows:

Isleta, $\frac{1}{2}$ of 1%, San Felipe $\frac{1}{2}$ of 1%, Santa Ana 25%, Sandia 1%, also Dr. Dillon of Laguna gives a possible 20% as a conservative estimate as out of 1000 Indians examined, 187 cases of trachoma were found.

It is conceded that the Indians of New Mexico are more susceptible to the disease than the white race, but from the reports of Dr. Dunn, of trachoma in the public schools of Santa Fe, we would be led to believe the reverse, as these schools are made up of American and Spanish American children.

I am unable to give official statistics as to the conditions in the Albuquerque public schools since there are no provisions for a systematic examination of the eyes of the school children in

our city; but from a general observation had from the examination of children referred to me for eye trouble, I believe I am justified in making the statement that the percent is very low if the disease is found at all.

While I believe trachoma not to exist in an alarming degree among the white race in New Mexico, yet the disease undoubtedly exists and I believe more stringent measures should be instituted in our public institutions, to prevent a possible epidemic of the disease.

Possibly more literature has been produced on trachoma than any other disease of the eye.

Nevertheless, we are at the present time unable to isolate the specific germ.

Much research work has been done of late, however investigators have been unable to form a unity of opinion as to the result of their investigation.

The so-called trachoma bodies have been eliminated as the exciting cause of the disease, since they are found in the normal conjunctiva of infants, also they are found in other forms of conjunctivitis, so that the real cause of trachoma is yet to be discovered.

It was at the beginning of the last century that trachoma began to attract the attention of the medical profession to any great degree. It was at that time that the disease first showed itself as an epidemic in the European armies.

For when Napoleon in 1798, with an army of 32,000 men, landed in Egypt most of the soldiers were attacked with a violent ophthalmia, and they were supposed to have brought with them, on their return to Europe, the disease which formerly was supposed to be confined to Egypt, but subsequent historical researches however, have shown

that the disease had already been endemic in Europe since antiquity. But when by reason of the Napoleonic wars the armies came so frequently in contact with each other and the civil population, the disease became more widely disseminated and occurred in epidemics.

In some countries it became frightfully prevalent.

In the English army during the year 1818, there were more than 5,000 soldiers on the invalid list who had been rendered blind as a consequence of trachoma.

In the Prussian Army from 1813 to 1817, 20,000 to 30,000 men were attacked with it; in the Russian Army from 1816 to 1839 76,811 men were subject to the disease.

In Belgium in 1840 one out of every five soldiers was affected. The armies disseminated trachoma among the civil population through the discharge of its soldiers.

When they had so many trachomatous soldiers in the Belgium army that they did not know what to do, the Government applied to a celebrated ophthalmologist of that time, who advised them to dismiss the trachomatous soldiers to their homes.

By means of this fatal measure, trachoma became diffused in Belgium to an extent it has been observed in no other European state.

Among the civil population trachoma finds a favorable soil for its dissemination in places where many men dwell together, particularly in large public institutions and asylums.

If the disease has found its way into such an institution and no measures are taken against its spreading, soon a great number or even all the in-

mates will be attacked by it.

In a pauper school in Holborn the whole 500 children suffered from trachoma.

While the negro is supposed to be immune, Mackenzie tells the story of an epidemic which raged upon the French slave ship, *Rodeur*, in the year 1819. The disease broke out during the voyage and first spread among the negroes, who, to the number of 160, were crowded together in the hold.

Soon one of the sailors also was attacked and three days later the captain and almost the whole crew were attacked with the disease so that it was only with greatest difficulty that the ship could be brought to its destination.

According to the description of the disease at that time, it ran a very acute course and was attended with profuse secretion which explains the rapidity with which it spread.

Now that epidemics are infrequent the acute form has become rare, trachoma therefore not only appears under a varying clinical aspect, sometimes acute and threatening, sometimes chronic and mild, but it also seems to have changed its character in the course of time.

The reason for this change in the character of the disease is explained by the improved sanitary conditions since all acute and threatening cases are complicated by mixed infection.

The disease is characterized by numerous oval masses in the palpebral conjunctiva, resembling sago grains, chronicity, and by grave subsequent changes, in the conjunctiva, lids and frequently the cornea.

It occurs frequently in children and young people, but is found at all ages.

By most authors, it is divided into

three stages, hypertrophy, coalescence and cicatrization. It is also classified as mild, usual and violent in form.

In the mild form the granulations come on gradually and give the patient very little or no discomfort during the hypertrophic development, but more frequently after an infection we find a pronounced irritation, increased lachrymation which is soon followed by a mucopurulent discharge.

The bulbar conjunctiva becomes injected and we may find corneal involvement early in this stage.

On everting the lids, we find the conjunctiva thick and injected, also inflamed to such a degree that the granules are frequently covered up and not seen until the inflammation begins to subside.

There is, however, most fortunately a less frequent but very violent form of the disease with the exaggerated symptoms seen early and severe involvement of the cornea and adjacent lymphatic glands due to a mixed infection as mentioned elsewhere in this paper.

The hypertrophic stage may last for a few weeks or extend into months and gradually pass into the stage of coalescence or cicatrization.

As the granules coalesce, cicatricial bands are found throughout the palpebral conjunctiva causing contraction of the conjunctiva, deformity of the cartilage and thereby producing entropion.

Pannus is a common complication and consists of a vascular growth on the cornea and is the result of irritation and invasion of the disease between the epithelial layer and Bowman's Membrane.

Corneal ulcers are not an uncommon

complication and sometimes extend to perforation.

If recognized early and given proper care it is not necessary for the disease to pass through the three stages named as it may be arrested with the preservation of what normal tissue there is present at any part of the first or second stage.

The granules are substantially miniature lymph glands and are the essential elements of trachoma. They consist of a delicate indefinite connective tissue capsule containing a mass of lymphoid cells, being traversed by very fine connective tissue, trabicula, and are also well supplied with small blood vessels.

As the disease advances to the second stage, the septa between the individual follicles disappear, and the lymphoid masses become continuous forming plaques of various sizes and the conjunctiva proper gradually gives way to cicatricial tissue.

Diagnosis. In the early stages it may be confused with follicular conjunctivitis, vernal catarrh, tuberculosis of the conjunctiva, or Parinauds disease.

The history of the case will usually be sufficient to distinguish it from vernal catarrh, if not the microscope will make it certain as the nodules in vernal catarrh are fibrinous.

The same is true of tubercular conjunctivitis as the tubercle bacilli will be found; while in Parinauds disease there is excessive involvement of the cervical and preauricular glands with the disease confined to one side is usually sufficient for diagnosis.

The prognosis is favorable when seen in the first stage or early in the second.

When the cornea has become involved further damage may be obviated but the tissue that has been destroyed cannot be restored if more than the epithelial surface is involved.

Treatment is prophylactic, medicinal and surgical.

Trachoma should be treated as an infectious disease.

In home care should be taken to require the patient to sleep alone also prevent other members of the family from using the same towels, wash basins or any article of toilet that may carry infection.

In public institutions, barracks and schools isolation should be enforced.

The eyes should be frequently cleansed with boric acid solution or mercuric chloride solution 1 to 10,000 to remove the secretion.

For the muco-purulent condition a solution of nitrate of silver 2% should be applied until the secretion has subsided, and then the application of the copper sulphate pencil and other remedies as indicated.

The surgical treatments most used is by expression with either the roller or ring forceps. This may be done more effectively by first scarifying the conjunctiva before applying expression in this way.

Some men prefer the operation of *grattage* which consists in making a series of parallel scarifications in the conjunctiva with a specially constructed scalpel and then brushing the scarified area vigorously with a tooth brush saturated with 1 to 500 bichloride solution, of which, the latter should be applied in all operations.

References: Fuch, Duane, De Schweinitz.

A Comparison of the Wassermann and Noguchi Reactions, and the Effect of Treatment on These Reactions With Report of Cases

Salting Simon, A. B., M. D.

Denver, Colorado.

Read Before the 30th Annual Session of the New Mexico Medical Society,
East Las Vegas, N. M., September 9th, 1911.

The essential differences between the Wassermann and Noguchi reactions are, firstly, that the former employs the anti-sheep hemolytic system and the latter the anti-human, and, secondly, that in the latter system only the acetone-insoluble tissue lipoids free from proteid constituents are used as antigen.

Noguchi claims, and a number of investigators have confirmed his claims, that his system does away with the element of uncertainty due to the frequent presence in human serum of varying quantities of natural anti-sheep amboceptor. In my experience this factor has been of so much importance that I have recently employed both the Wassermann and Noguchi methods as a check upon one another and thus affording me more accurate findings than when only one method is employed. It is quite true that natural anti-sheep amboceptor is not always present in human serum, but it has been found by a number of investigators in 53% of human serums examined. While I

have on occasions found it present in a higher per cent of my serums at one examination I should say that the average seems to be about 40%. Aschheim has pointed out that this natural anti-sheep amboceptor begins to appear as early as the second year of life. The claim at one time made by Noguchi that his method is simpler and more easily carried out than the original Wassermann, because the amboceptor, antigen and even complement, can be dried and preserved upon paper, I believe does not hold so true today; for Noguchi himself no longer employs dried antigen nor dried complement, and the anti-sheep amboceptor can be just as well dried and preserved on paper as can an anti-human amboceptor. The difficulty in obtaining sheep's corpuscles for the Wassermann, and the ease with which human corpuscles are obtained, is an advantage for the Noguchi method. Less blood is required for the Noguchi method than is the case with the Wassermann. Noguchi usually uses only one drop (accurately

0.02 c. c) of active serum in his test, provided that the serum in question is not anti-complimentary as sometimes happens to be the case with old specimens, whereas .2 of a c. c. inactivated serum is used in the Wassermann. During inactivation the serum is deprived of some of its anti-body content, often as much as 75 per cent may be lost by this process, the advantage therefore for the Noguchi method is apparent.

*"Active serum should never be used in the original Wassermann reaction for two important reasons, namely, in that method it is necessary to destroy the human complement contained in a given specimen before adding the guinea pig's complement, because human complement, while extremely feeble upon human corpuscles, is highly powerful when brought into contact with sheep's corpuscles, hence cannot be left undestroyed in a test in which a definite quantity of complement is to be fixed. The second reason is that the antigen preparation as originally recommended contains numerous colloidal substances of protein nature and is apt to give a pseudo-specific or proteotronic reaction with a non-luetic serum."

My own experience with Noguchi reaction, performed now over three hundred times in connection with the Wassermann, would seem to indicate that it is slightly more sensitive, that is a smaller amount of the syphilitic antibody may be detected than by the Wassermann. I have in several instances for example obtained an absolutely negative Wassermann and faintly positive Noguchi in cases of Syphilis that had been well treated. Both reactions ran parallel tests made for

the diagnosis of Syphilis. Both methods require careful titration or standardization of antigen, amboceptor and complement.

(*Personal communication from Dr. Noguchi.)

I have during the past seven months given over one hundred injections of Salvarsan. Most of these were administered by the intravenous method, which I regard as the best method of employing this valuable remedy. All injections were controlled by the Wassermann reaction and in most instances, by both the Wassermann and Noguchi reactions. Where the Wassermann reaction was strongly positive five decigrams of Salvarsan were given as a first injection to the average male, healthy, adult. A somewhat smaller dose in case of females. This was followed in about a week by a second dose of Salvarsan, of about five and one-half decigrams. The Wassermann reaction of the blood was then taken, three and six weeks after the second injection, and wherever same was still distinctly positive a third injection of Salvarsan .6 grams by the intramuscular method was given. This has so far been found necessary only in about three or four patients. In most instances the Wassermann reaction becomes negative within eight weeks after the second injection. In a number of instances I have used mercury by mouth following the second injection of Salvarsan, requiring the patient to use same for some two or three weeks, then stop the mercury two weeks previous to taking the blood for a Wassermann. The mercury is stopped since it seems to have an inhibitory action upon the antibodies. Recently Craig and Nichols (Journal A. M. A., Aug. 5, 1911) have pointed out that

alcohol has an inhibitory action upon the antibodies of Syphilis, their experiments go to prove that a strongly positive Wassermann may become negative following the ingestion of alcohol in the shape of beer or whiskey, and that this negative Wassermann persists from a few hours to several days. The authors offer this as a possible explanation of the well-known disastrous effects of Syphilis upon the users of alcohol.

For sometime I have adopted the practice in patients giving either a weak or doubtful Wassermann or Noguchi, of repeating the test after the patient had been placed for several weeks upon a course of Potassium iodide. My reason for so doing is that the KI might dissolve the connective tissue barrier, and permit the treponemae to develop their antibodies in the blood stream.

Another point that the serologist must not overlook is the fact that often the blood becomes decidedly lipaemic when withdrawn shortly after a full meal; as this interferes with the Wassermann reaction, care should be taken that the blood be withdrawn at a time when the stomach is empty.

The Salvarsan treatment of Syphilis has been divided into two phases by some clinicians. The first phase may be said to terminate with the disappearance of all clinical signs of the disease. This phase usually ends two weeks after the injection of Salvarsan. The second phase ends with the permanent disappearance of the Wassermann reaction. I am not yet in the position to state just how permanent the negative Wassermann reaction thus far obtained in many of the cases treated with Salvarsan will prove to

be. Wherever a positive Wassermann reaction is obtained after it had become negative following treatment, it would indicate that the treatment was not sufficient. In other words, some of the spirochaete pallidum in connective tissue escaped the action of the remedy, thus later giving rise to a positive Wassermann. Two explanations have been offered for this occurrence. One that the treponemae that escaped were probably inaccessible to the action of the drug, owing to the connective tissue proliferation produced thus walling them off from the blood stream, or that the dose of the drug was too small. This can be eliminated by another dose of Salvarsan or a course of mercury. It has been my experience that when mercury has been ineffective in the treatment of Syphilis, it becomes decidedly effective following an injection of Salvarsan. In cases of Syphilis previously thoroughly treated with mercury but showing a moderate strong Wassermann, one or two injections of Salvarsan is all that is required to cure the disease. So that one can conclude that Hg and Salvarsan are strongly synergistic. That Salvarsan has cured Syphilis is proven by the fact that there have been six cases reported treated with Salvarsan, who became reinfected with a typical chancre. Evidence has been recently forthcoming that the elimination of Salvarsan, given by the intravenous method has not been as rapid as was first supposed, and that the drug probably remains in the system for at least a number of weeks, doing effective work. If this is true, the disadvantage of the intramuscular method, such as pain and the uncertainty of the dose that may become absorbed renders that

method much inferior to the intravenous method, which has everything to commend it.

The following cases are briefly reported to illustrate the effect of Salvarsan upon the Wassermann reaction, sufficient time having elapsed to give one a fair judgment as to the permanency of the negative Wassermann obtained.

REPORT OF CASES.

Mr. P., age 43, married twice; referred by Dr. Coover. First wife had three children. Second wife had two children, one miscarriage and one still born. Denies specific infection; admits having had gonorrhoea. Has had eye trouble for many years. At present has a marked iritis. Has been on potassium iodide, last dose four days before the taking of the blood. Wassermann reaction January 14, 1911, strongly positive (++++). "606" six decigrams January 18, 1911 intramuscularly. On Feb. 16th a Wassermann reaction was slightly positive (+---). April 7th Wassermann reaction was negative (----).

Mrs. K., referred by Drs. Coover and Henry Sewall. Patient was almost blind, due to a Luetic deposit in the vitreous. Wassermann reaction positive (++++-) November 1910. Administration of Salvarsan by Dr. Sewall by the intramuscular method November 18, 1910. Almost immediately the clinical symptoms improved. On January 20, 1911 Wassermann reaction was negative (----). On July 17, 1911 Wassermann reaction was still negative (----), although the Noguchi showed a slightly positive reaction (+---).

S. L. R., referred by Dr. Fowler of Littleton. Had the secondaries well

marked at the time of taking the blood; a case of undoubted specific infection. Wassermann reaction positive (++++-). Had been on treatment for one month previous. Was given Salvarsan intravenously January 18, 1911. February 9th Wassermann reaction was negative (----). On February 23, the Wassermann reaction became moderately positive (++++-). Second dose of Salvarsan was administered February 25th. April 21 the Wassermann reaction was negative (----).

M. G., referred by Dr. Barry. A case of undoubted infection. Has small patches in the month and scalp covered with small pustules. Had six months of mixed treatment. Recently treated with mercury. Wassermann reaction strongly positive (++++) on January 19, 1911. Administration of Salvarsan by Dr. Barry January 22, 1911. March 9, 1911 Wassermann reaction moderately positive (++++-). Clinical symptoms all disappeared. April 21st Wassermann reaction negative (----).

E. B. P., age 25. July 15, 1909 had initial lesion followed by secondaries. Has been taking mercury for about two years. Last dose of mercury March 10, 1911. At present has sore tonsils and pains in the tibia. Wassermann and Noguchi reactions slightly positive (+---). Administration of Salvarsan, five decigrams intravenous method, May 6th, 1910. Wassermann reaction May 16, 1911 negative (----), Noguchi moderately positive (++++-). June 26th Wassermann and Noguchi reactions both negative (----).

F. S., age 26, female; infected in 1904. Had very severe

secondaries. Had two miscarriages. Has taken thorough course in mercury and potassium iodide over a period of three years. May 27 Wassermann reaction moderately positive (++)—, Noguchi positive (+++—). Administration of Salvarsan five decigrams June 1, 1911. Second injection six decigrams intramuscularly June 7, 1911. July 3rd Wassermann reaction was negative (— — — —). The Noguchi reaction was off this week, I therefore have no record of same. August 7th, 1911 both Wassermann and Noguchi reactions were negative (— — — —).

J. S., age 17, single; referred by Dr. Albert E. Smith. Was born with snuffles, has always been weak. Subject to sore throat. At present has a large broken down gummatous ulceration in the naso-pharynx. Undoubted case of congenital Lues. Had received 18 injections of cacodylate of soda, last injection May 29, 1911, also much mercury and iodide of potash. Wassermann reaction June 5th, 1911 strongly positive (++++), Noguchi strongly positive (++++). Intravenous injection of 3 1-2 decigrams of Salvarsan on June 10, 1911. Some of the Salvarsan escaped into the muscle and produced myositis. On account of this a second injection of Salvarsan was not given until July 21, 1911, when 4 1-2 decigrams of Salvarsan was given intravenously. Wassermann reaction on July 31st being still strongly positive (++++), a third injection of Salvarsan five decigrams was given August 5, 1911. In this case the clinical symptoms improved immediately after the first injection, and the boy was practically well physically a few days after the second injection.

A third injection, however, was decided upon owing to the still strong positive Wassermann.

Mrs. K. Had secondaries seven years ago. No distinct history of the primary sore. At present complains of pains in the shin bones at night. Has a marked adenitis. Has had four courses of twenty-one inunctions each of mercury at Hot Springs. July 17 both Wassermann and Noguchi reactions were moderately positive (++)—. July 19 five decigrams of Salvarsan was given intravenously. August 7th, 1911 both Wassermann and Noguchi reactions were negative (— — — —).

V. R., age 18, male; referred by Dr. Albert Smith. Has at the present time an indurated chancre on the penis. An examination of the serum from the initial lesion showed the treponema pallidum. Wassermann and Noguchi reactions June 26 were both strongly positive (++++), nine days after the beginning of the initial lesion. This is the earliest positive Wassermann that I have ever obtained following the primary lesion. Five decigrams of Salvarsan were administered June 29, 1911. July 3 Wassermann reaction was strongly positive (++++), Noguchi reaction this week had fallen down on me, I therefore have no record of same. July 5 a second injection of 5½ decigrams was administered intravenously. August 7, 1911 both Wassermann and Noguchi reactions were negative (— — — —). In this patient the primary sore healed within a week after the first Salvarsan injection. He never developed any secondaries. I believe that this is the ideal method of treating Syphilis. I am convinced that where a positive

diagnosis can be made before the appearance of the secondaries, one or at the most two administrations of Salvarsan will effectually eradicate the disease.

A. T., male, age 45, married; referred by Dr. C. P. Conroy. In 1891 had a chancre. No marked secondaries. Had swollen testicle which was suspected to be tubercular, but it cleared under potassium iodide. Has had very little mercury treatment but enormous doses of potassium iodide. Developed a tabes some six or seven years ago and has at the present time absent knee jerks, marked Argyll Robertson's Pupil and lightning pains in his legs. July 10 Wassermann was moderately positive (+ + — —), Noguchi moderately positive (+ + — —), July 13 was given intravenous injection of $5\frac{1}{2}$ decigrams of Salvarsan. The symptoms improved markedly, pains disappeared, gait somewhat better. No change in the eye symptoms. August 7, 1911 Wassermann and Noguchi reactions both negative (— — — —). August 28, 1911, both W and N were again negative (— — — —).

P. R., aged 28, male. In 1901 had a chancre and four weeks later developed secondaries. At present has a marked sore and cracked tongue, which is very painful. Has had some mercurial treatment, both by mouth and intramuscular injections. Has had potassium iodide at different times. June 26 Wassermann reaction slightly positive (+ — — —), Noguchi reaction moderately positive (+ + — —). On June 28th administered $4\frac{1}{2}$ decigrams of Salvarsan intravenously, and on July 10th the Wassermann and No-

guchi reactions were strongly positive (+ + + +). On July 20 a second dose of $5\frac{1}{2}$ decigrams of Salvarsan was given. This case is reported because the Wassermann reaction became stronger following the first administration of Salvarsan. This would indicate that the Salvarsan stimulates the formation of antibodies immediately after its administration. His clinical symptoms were very much improved by the first administration of Salvarsan, and he is at the present time clinically well, tongue having become absolutely healed.

Mrs. E., referred by Dr. O. P. Shippy of Saguache; age 34, married, infected from husband in March, 1910. Had the initial lesion in the vagina. At present has no symptoms except a marked cervical adenitis. Has had mercury and iodide of potash for about a year, also some injections of succinimide of mercury. Was taking mercury up to two days previous to taking the blood. On May 9th the Wassermann reaction was slightly positive (+ — — —), and Noguchi positive (+ + + —). Blood was taken again on May 10th and the Wassermann reaction showed positive (+ + + —) and Noguchi strongly positive (+ + + +). On May 11th five decigrams of Salvarsan was administered intravenously, and on May 18th 5 1-2 decigrams of Salvarsan was administered intravenously. On June 26th the Wassermann reaction was negative (— — — —), but the Noguchi moderately positive (+ + — —). On June 29th a third injection of five decigrams of Salvarsan was given intramuscularly.

"606" and the Wassermann Reaction

H. A. Ingalls, Roswell, N. M.

Read at the 30th Annual Meeting of the New Mexico Medical Society,
East Las Vegas, N. M., September 6th-9th, 1911.

It is not the object of this paper to deal with the chemistry of Salvarsan or the technic of the Wasserman, but to treat of the subjects from the view point of the general practitioner.

The work thus far accomplished leaves no room for doubt that in arsenobenzol, or "606," we have an absolute specific for the infecting agent of syphilis if it can be brought in direct contact with the spirochaetae.

This fact admitted, our attention is directed to the best way for the administration of the drug so the greatest amount of benefit can be derived in the shortest space of time consistent with the general welfare of the patient. It may be well to emphasize the position of the writer in that the deductions to be made herein are based more upon the observations of more prominent workers in this field, rather than his own.

It was my good fortune and pleasure, only a few weeks ago, to have the opportunity of being with Heidingsfeld in his office and laboratories, observing his work in detail and profiting by his case records, which are now well up into the hundreds. Here we find the drug given by the intravenous method only and this distinguished worker claims he would resort to the older forms of treatment if compelled to rely upon the painful

intramuscular method. The results accomplished are truly marvelous; lesions disappear in from a few hours to ten days that formerly required weeks and months of persistent treatment.

The apparatus and technic are extremely simple and can be used by any of us. Heidingsfeld uses a neat modification of the ordinary transfusion set, of his own design, which can be procured from any of the instrument makers. The technic is as follows: .5 gm. of the powder is placed in a sterile mortar and is dissolved by the addition under constant grinding, of a ten per cent, sterile, chemically pure, solution of sodium hydroxide. This is added until the salt is in perfect solution and the mixture clear. Usually about thirty minims are required for this purpose. The solution is then thinned by the addition of a small quantity of sterile normal saline solution and transferred to the graduated glass cylinder of the transfusion outfit. Careful observation is now made to ascertain that the solution remains clear; if the slightest precipitate is to be noticed a few more drops of the sodium hydroxide is added, under agitation, until the solution is again clear. Normal saline solution, heated to 100 F., is then added to make a total of 300 cc, the amount for one injection.

The flexor surface of the elbow is then sterilized in the usual manner, but iodine is not added as it obscures the vein. A light tourniquet is placed above the elbow, being applied tight enough to produce passive congestion and render the selected vein more prominent. By having the patient open and close the hand the vein is rapidly filled after application of the tourniquet.

Should the vein be deeply placed an incision, under 2% cocaine, is advisable. This is not necessary except in very few cases.

Great care must be exercised in entering the vein so there will be no extravasation of the solution into the cellular tissue, an accident that causes in all cases a great amount of unnecessary pain and in a large percentage of such cases extensive sloughing.

As in all other forms of intravenous administration, all air must be driven out before the needle is entered. The best proof that the needle is properly inserted into the lumen of the vein is to release some of the air pressure and allow the blood to come up into the tubing where it can be seen in the glass portion. The tourniquet is then removed and the solution forced into the vein by air pressure.

The patients seem to suffer no inconvenience; the treatments are given in the office, where all aseptic precautions can be observed, and are then allowed to return home, often two or three hours distance by public conveyance. It is customary to insist upon the following instructions being carefully observed:

Remain quiet for the remainder of the day.

Avoid alcohol in all forms for 24 hours.

But little food until the next day.

The average individual insists he feels perfectly well and able for full duty. Doubtless many disregard all instructions and suffer no apparent ill effects.

The advantage of the intravenous treatment are, the rapid saturation of the system and the prompt disappearance of the symptoms.

The disadvantages are, the possibility of toxic symptoms resulting in acute nephritis, neuritis, etc., and the rapid elimination of the drug.

Referring to the question of toxicity, the cases thus far reported are so few (with always the thought the condition noted may be due to the disease and not the treatment) that many men of ripe experience are of the opinion the present dosage may be doubled without producing toxic symptoms.

It has been observed in a number of cases and in different locations that in those cases complicated by an existing Bright's, or a nervous disorder, the patients have been benefitted by the salvarsan treatment.

That salvarsan is the most efficient remedy known for the treatment of syphilis is proven by that great class of patients who have been under the influence of the mercurials and iodides for months, with no apparent results, but who clear up in a few days after the use of the new specific.

The question naturally arises as to the cause of the relapses seen after the use of arsenobenzol. If it is a specific, why should there be a relapse in any case.

The theory advanced by Captain Henry J. Nichols, Medical Corps, U.

S. Army, that the rapid elimination of the drug after the intravenous injection left many living spirochaetae in the deeper structures and that in these cases the relapse was inevitable, is sound, as specific action cannot be expected unless the drug is brought in direct contact with the organism.

In the light of our present knowledge it would seem the intravenous and the intramuscular injection must go hand in hand, at least in the more stubborn cases. The former for its prompt action in clearing up the lesions apparent at the time of examination and the latter for slow absorption in an endeavor to reach the infecting agent situated in the deeper structures.

The neutral suspension is mentioned only to be condemned. Salvarsan in this form is an intense irritant and either encapsulates or produces a slough.

For intramuscular injection the alkaline solution should be used. It is prepared as follows: The powder is placed in a small sterile mortar and about 10cc of hot sterile water added (the powder not dissolving readily in cold water). A sterile, four per cent solution of chemically pure sodium hydroxide is added until a clear solution is produced. When the alkali is first added a precipitate is formed which redissolves under the continued addition, from 3 to 4cc being the quantity usually required to produce a clear solution that has just passed the neutral point. Great care must be exercised to prevent excessive alkalinity as intense pain is caused by an error of this kind. Sterile water is then added to bring the total quantity to 20 cc, one half being injected into each buttock.

In considering the question of treat-

ment I can doubtless give you the opinion of the profession at large by quoting from Circular No. 3, issued by the War Department, office of The Surgeon General, June 3rd. Here we find the preferable treatment for the primary stage of the disease as "Two intravenous injections one week apart, or one intravenous injection followed in one week by an intramuscular injection." For the secondary stage, "The same treatment with salvarsan as given above, then vigorous course of mercury by inunction or injection for one month, followed by a repetition of the salvarsan treatment."

For the tertiary stage, "The treatment given for the primary stage as indicated, then a course of KI for one month, followed by a repetition of the salvarsan treatment."

From the treatment recommended by the Surgeon General it would seem that in the primary stage salvarsan should prove an absolute specific.

In the secondary and tertiary stage Hg and KI are recommended. As to the results obtained, opinion differs. Some make the assertion the latter drugs are more penetrating than "606" and kill the spirochaetae in the minute lesions of the deeper structures, while others claim they only exert an alterative action and in this way assist the specific remedy in destroying the infecting agents so well encapsulated at the first injection of arsenobenzol.

The Wassermann, and its modifications, when positive, are considered as diagnostic of syphilis. A negative result, however, may be had in cases with a clear history and presenting a perfect clinical picture of the disease. Why this should be has not been fully decided. The antibody theory is now re-

jected by most authorities, but should stand until a more perfect one is advanced.

The cost of equipment, the time required and the perfect technic necessary for a correct Wassermann places this reaction in the hands of the specialist and the modern general laboratory. The general practitioner can usually depend upon the history, symptoms and his microscope for a diagnosis of the disease, but the Wassermann must be his guide for future treatment and care of his cases.

The spirochaetae can be demonstrated in the serum of the chancre and the mucous patch. The technic is very simple. The lesion is carefully cleansed, care being taken not to produce a flow of blood, and the surface irritated to produce a flow of serum, a drop of which is placed under the microscope, with dark back-ground illuminator, and the infected agent demonstrated.

The excision of the lesion, sectioning and staining with Giemsa's stain, causes a delay of but 24 hours in arriving at a positive diagnosis of the nature of the condition and should be used by all who are not prepared for an immediate Wassermann.

In addition to the value of the primary sore for sectioning, its removal is to be recommended in all cases to diminish the amount of the infection and remove a source of production of toxins.

Be it understood that I do not attempt to discourage the use of the Wassermann in every case, both early and late. It is now considered by all workers in this field that a light Was-

sermann indicates a mild infection in the majority of all cases and if for no other reason our friends of the laboratories should be called to the aid of the patient and ourselves and the blood taken for the reaction before the administration of "606."

From a study of the cases and records available it is found that about 73 per cent of all cases show a negative reaction after the use of "606." Of these about 15 per cent relapse. This is quoted to emphasize the importance of follow up Wassermann on all cases so that subsequent treatment can be instituted in the great percentage we must expect to relapse.

In conclusion the following deductions can be made:

1st. Arsenobenzol is the greatest parasitotropic remedy, with the least organotropic character, known.

2nd. In the secondary and tertiary stages the drug should be administered first intravenously and then intramuscularly.

3rd. In chronic cases Hg and KI are indicated.

4th. If possible, blood for the Wasserman should be taken before treatment is begun.

5th. Repeated Wassermans until negative at least one year.

6th. Prompt excision of the initial sore to reduce the amount of infection.

7th. The drug as now given is non-toxic.

8th. The end result is still in doubt and clinical manifestations of tertiary syphilis may appear even after several injections and a long series of negative Wassermans.

WASSERMANN AND MOUSE CANCER.

The public press has again been excited by the reports emanating from Wassermann's laboratory regarding his experimental work upon the mouse tumor of Jensen.

The remarkable discoveries of Ehrlich in chemotherapy inspired Wassermann to seek a chemical agent potent to destroy tumor cells by action after its injection into the circulation. The chemical substances selected after thoro experimentation were designed to act organotropically instead of in a parasitropic manner, as is the working of salvarsan.

Sodium tellurate and selenate were found to have a specific action upon cancer cells in vitro. Following this observation these salts were injected into mouse cancers and occasionally a cure resulted. Favorable action was not secured by injecting these substances into the blood stream.

To secure the proper diffusible chemical agents thereupon became the subject of further investigation, as a result of which eosin was finally (at this date) selected to act in combination with selenium.

After two injections intravenously the mouse cancer appears to become softer and under the constant action of the chemotoxic substances the cancer cells apparently undergo some liquefactive process. The interesting proc-

ess causing the disappearance of the tumor results from the resorption of the liquified cancerous cells. Too rapid resorption of the cancerous growth is accompanied by the death of the mouse. Within ten days small tumors are completely reabsorbed and do not reappear.

Wassermann with true scientific devotion to facts has not made vain references to the applicability of this mode of treatment to the carcinomata of the human family.

In brief, as a result of animal experimentation involving the trial of two hundred varied chemical combinations, eosin and selenium were found to be effective in causing the liquefaction, resorption, and disappearance of cancerous tumors in mice. The results were not uniform, as many of the mice, died during the first three days, before liquefaction set in, and numerous others perished as a result of the toxicity of the reabsorbed cancer cells.

The maximum dose given was 0.0025 gm. (*Berliner Klinische Wochenschrift*, January 1, 1912).

Cancer research has made a distinct advance and specific chemotherapy has received further development. Time and trial will determine the interrelation of the mouse tumors and human cancer both in the field of histopathology and therapeutics.

(Medical Review of Reviews, April 1912).

**NEXT MEETING NEW MEXICO MEDICAL SOCIETY, ROSWELL,
SEPTEMBER 12TH, 13TH AND 14TH, 1912.**

Leigh and Tint (Illinois Medical Journal, April 1912) report on the use of antogenous vaccines in the treatment of pulmonary tuberculosis. 3 classes of cases were employed; (1) Incipient cases with night sweats, frequent unproductive coughing, positive Von Pirquet reaction and sputum in which tubercle bacilli could not be demonstrated. (2) Advanced pulmonary tuberculosis and (3) cases with cavity formation in one or both lungs, accompanied by frequent hemorrhages.

The vaccines were made from the sputum and small gradually increas-

ing doses were used. Some slight redness and tenderness at the point of injection followed, but this was easily controlled by hot compresses. The results were more or less satisfactory. Cough became productive, the labored respirations grew easy, night sweats ceased, appetite improved and a gain in weight was noted in some cases while in far advanced cases with cavity formation the distressing symptoms did not entirely cease but some relief followed. Fifty cases were studied; twenty incipient, twenty-two advanced and eight far advanced.



**NEXT MEETING NEW MEXICO
MEDICAL SOCIETY, ROSWELL,
SEPTEMBER 12TH, 13TH AND
14TH, 1912.**

BOOK REVIEW

NEW AND NON-OFFICIAL REMEDIES

Price, Cloth, \$0.50; Paper, \$0.25; Pp. 298. Chicago: American Medical Association, 1912

This book contains descriptions and a statement of the actions and uses of all articles which have been examined and excepted by the Council on Pharmacy and Chemistry prior to Jan. 1, 1912, for inclusion in the list of New and Nonofficial Remedies.

The book is unique. The work of the Council during its seven years of existence and the reports of the Propaganda Department of The Journal A. M. A. have convinced the physician that in the prescribing of proprietary remedies he must be more careful in his selection of those which he directs for his patients. Nowhere else can the physician or the pharmacist turn for reliable, unbiased information concerning the new remedies. This book enables the physician to make such selection and the careful pharmacist to know the character of the remedies he dispenses. It should be in the hands of every one of them.

GONORRHOEA IN THE MALE

By

H. Oppenheimer, M. D., F. R. C. P.

\$1.00 Net

New Yory, Rebman Company

This is an excellent monograph. The book deals only with acute gonorrhoea

in the male and is most clear in its treatment of this condition of specific purulent urethial catarrh.

After discussing in some detail the diagnosis and syptomatology of acute gonorrhoea the author takes up the question of treatment and it is in this that the value of the work lies. He admits that there are many ways in which the indications for treatment may be fulfilled and does not attempt to discuss these plans. He is opposed to the irrigation plan of treatment—the Valentine treatment—in acute gonorrhoea.

His preference is for mild injections of permanganate of potash, beginning with a solution of 1-18 grain to the ounce, slowly increasing the strength to 1-6 grain to the ounce. He favors the internal use of the balsamics and his preference is for santalwood oil in large doses (15 to 20 minius t. i. d.) over prolonged periods. General hygienic and dietetic measures are combined with local and internal treatment.

A feature of the essay is the discussion of the individual peculiarities of the urethra and reasoning out why in some cases results are not obtained as expected.

Acute posterior urethritis is discussed as are also the various complications of gonorrhoea.

A strong section is that devoted to "Proofs of Cure."

The material is placed before the reader in a clear and concise way and

the reason for each suggestion given in such clear detail that we do not hesitate to recommend this excellent monograph to the general practitioner as well as to the specialist.

PROGRESSIVE MEDICINE

A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences.

Vol. 14, No. 1. Whole Number 53.

Edited by Hobart Armory Hare, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College, Philadelphia, assisted by Leighton F. Appleman, Instructor in Therapeutics, Jefferson Medical College, Philadelphia. March 1, 1912. Lea & Febiger, Philadelphia and New York.

\$6 per annum.

Progressive Medicine to the man who has not access to a large medical library, and the leading medical periodicals of the world or who is limited in time for reading these, though accessible, is priceless. It is ably edited by men of authority and repute, who get the best medical literature of the world. From this the facts; advanced ideas; and progressive attainments of the profession are selected, and put in condensed and readily readable form, for those who will, may read. The repetitions are omitted, and likewise that not worthy of consideration, and what remains and makes up progressive medicine is a condensation of the best and most advanced from the profession for the year.

The surgery of the Head, Neck,

and Thorax, is brought up to date, and is carefully prepared. Aside from being instructive, it is very interesting reading.

The prominence of sanitation, and general therapeutics, as applied to infectious diseases, makes this department important. In general medicine these diseases are foremost at the present time, and are easily coming in for a very large share of the work being done in the profession at the present. The department makes it absolutely possible for the reader to see the latest and best discoveries and advancements made through the year, in a comparatively small space. It is ably compiled and right up to date, and is not only worth while to read, but the reading becomes a necessity.

The other departments while of more importance to the specialists are of interest to the general practitioner. Because it is imperative that the general practitioner become as versatile, medically as possible, and no better single work exists where-by he can become so, than by owning and reading Progressive Medicine. It is well worth the price and a place in every medical library.

T. C. S.

SURGICAL CLINICS OF JOHN B. MURPHY, M. D.

Volume I, Number II

The Surgical Clinics of John B. Murphy, M. D., at Mercy Hospital, Chicago. Volume I. Number II. Octavo of 291 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1912. Published Bi-month-

ly. Price per year: Paper, \$8.00.
Cloth, \$12.00.

W. B. SAUNDERS COMPANY

Philadelphia

London

The second number of Murphy's Clinics is a better number than the first. More time and care has been taken in its preparation and the subject matter carefully selected.

Among the subjects treated in this number are: Ununited fracture, tibia, neck of femur and humerus, treated by transplantation of bone; Charcot's Ankle Joint; Pelvic Tumor; Prolapsus Recti; Cutaneous Syphilis.

We have every reason to believe that this departure will be a most helpful one to the general surgeon and practitioner and we express again our commendation of this work.

NERVOUS AND MENTAL DISEASES

The new (7th) Edition

Nervous and Mental Diseases. By Archbald Church, M. D., Professor of Nervous and Mental Diseases and Medical Jurisprudence in Northwestern University Medical School, Chicago; and Frederick Peterson, M. D., Professor of Psychiatry, Columbia University. Seventh Edition, revised. Octavo volume of 932 pages, with 338 illustrations. Philadelphia and London: W. B. Saunders Company, 1911. Cloth \$5.00 net; Half Morocco, \$6.50 net.

The seventh edition of Church & Peterson's well known and justly popular work on nervous and mental diseases is timely and will not only be welcomed by those who have been familiar with the earlier editions but will

make for itself many new friends.

Noteworthy advances have been made during the past few years along neurological lines the subject developing *pari-passu* with allied branches. These advances are well shown in the present volume, which while containing a large amount of new material is no larger than former editions,—the “dead-wood” having been carefully culled out.

The subject of neurology is a difficult one, and unless presented with unusual clearness the student becomes involved in difficulties from which there seems to be no way of extricating himself. This difficulty is happily overcome in the clear and forceful style in which the articles in this work are written, as its authors state it is intended as a text book, and as such is not made the battleground for conflicting theories.

The subject matter is arranged upon an anatomical rather than a pathological basis, making it particularly helpful as a work of reference.

The subject of mental diseases has been lifted above the metaphysical fog which so often surrounds it, and is treated of in a practical way. Attention has been given to clearing up some of the difficulties of classification, for which many will be thankful. A rather lengthy review of some of the problems of psychiatry embodied in former editions have been omitted in the seventh edition. This we do not feel to be a loss to the work as a text book, and as a text book it must be judged. The average student has neither the time nor inclination to give to such material, excellent tho' it may

be in itself; but must pass it by until a better understanding of his subject be gained by the experience of later life, at which time he will consult the more elaborate treatises for this very interesting but not altogether practical information.

The dress of the book, its size, binding, paper and typography are in accord with its intention, service. The type is clear and easily read, we are not called upon as we are at times to

develope a case of eye-strain while reading about it. Among the illustrations we note many new faces and welcome many which have become to us the faces of familiar friends.

We feel that there was a need for this new edition and that authors and publishers alike should be congratulated upon the way in which the need has been met by them.

C. T. S.



**NEXT MEETING NEW MEXICO
MEDICAL SOCIETY, ROSWELL,
SEPTEMBER 12TH, 13TH AND
14TH, 1912.**

PRELIMINARY PROGRAM

Thirty-first Annual Session, New Mexico Medical Society.

Roswell, N. M., Sept. 12th, 13th and 14th, 1912.

All Meetings at the Court-house.

THURSDAY, 12th

OPENING EXERCISES.

8 A. M. Registration at Secretary's desk.

10 A. M. Session called to order by President, Dr. R. L. Bradley.

Invocation, Eld. M. C. Hughes.

Welcome address, behalf of City, Mayor, W. M. Atkinson.

Welcome address, behalf Chaves Co. Med. Society, Dr. J. W. Kinsinger

Response to welcome addresses, Dr. F. F. Doepp, of Carlsbad.

Adjourn for dinner.

1:30 to 6. P. M. Scientific work.

8 P. M. Public meeting. Address by (name to be supplied)

FRIDAY, 13th

8 A. M. to 12 M. Scientific work.

1:30 to 4. P. M. Scientific work.

4:30 P. M. Auto drive, starting from Court-house.

8 P. M. Memorial address, by C. E. Lukens of Albuquerque.

SATURDAY, 14th

8 A. M. to 12 M. Scientific work.

1:30 to 6 P. M. Scientific work.

8 P. M. Annual Banquet at (place announced later.)

The New Mexico Medical Journal

Volume VIII

JUNE, 1912

No. 3

E · D · I · T · O · R · I · A · L

The New Mexico Medical Journal is not responsible for the opinions expressed by any of its contributors.

THE MEDICAL BILL

Below we publish in full a certified copy of the Medical Bill as passed by both senate and house of the first state legislature and which failed to become a law by reason of the governor refusing to sign same.

AMENDED HOUSE SUBSTITUTE FOR HOUSE BILL NO. 17.

An Act to Create a State Board of Medical Examiners; To prescribe its duties and powers; to provide for the compensation and expenses of its members; and to regulate the practice of medicine.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF NEW MEXICO:

Section 1. That a State Board of Medical Examiners is hereby created, which shall consist of seven members, to be appointed by the Governor by and with the consent and advice of the Senate. No person shall be eligible for appointment as a member of said board who has not resided and practiced medicine in the state for at least five years next preceding his appointment, and who is not a graduate from a legal and reputable college of medicine of the school to which he

belongs. Not more than three of said members shall belong to the same school or system of practice, nor shall any member be a stockholder or member of a faculty or board of trustees of any medical college.

Section 2. Within thirty days after this act shall become law, the Governor shall appoint the members of said board whose terms shall expire on the first day of February, 1913. On said date the Governor shall appoint four members of said board for the term of two years, and three members thereof for a term of four years; thereafter the Governor shall appoint members for a term of four years to succeed those whose terms expire.

Sec. 3. The members of said board shall qualify by taking an oath of office. The officers of said board shall be a president, vice president, and secretary-treasurer. Five members shall constitute a quorum. Special meetings may be held upon a call of at least three members. The board may prescribe rules, regulations and by-laws for the conduct of its proceedings and government, and may also adopt a seal. Any member shall have power to administer oaths for all purposes required in the conduct of the business of the board.

Sec. 4. Said board shall keep a register which shall show the name, age and place of residence of each person making application for examination; the year in, and the institution from, which said applicant was graduated; the time spent in study by said applicant in the institution or institutions which he may have attended and the place or places of residence of said applicant since his graduation, together with approximate dates of residence in each place. Said register shall also show whether applicants were licensed or rejected. It shall be prima facie evidence of all matters contained therein. The secretary of the board shall on the first day of March of the year transmit a certified copy of said register to the secretary of state for permanent record in his office. A certified copy of said register or of any portion thereof under the hand seal of the secretary of said board shall be admitted in evidence in all courts with the same force and effect as the original. The board shall also keep a record of its proceedings.

Sec. 5. Each member of the State Board of Medical Examiners shall receive ten dollars per day for each day's attendance and time spent in travel to and from meetings, and shall also receive actual and necessary traveling and hotel expenses. Any extra services rendered by members of the board shall be paid for at the rate of \$5.00 per day and actual and necessary traveling and hotel expenses; provided that such extra services must be authorized in writing by at least five members of the board. Such per diem and other expenses shall be paid out of the proceeds of the moneys collected by said board from the revenues

received by it. On the first day of December, of each and every year, the treasurer of said board shall turn over to the state treasurer any monies remaining in his hands after the payment of the expenses of the board, which shall be, by said state treasurer, deposited to the credit of the current school fund of the state.

Sec. 6. All applicants for licenses to practice medicine in the state, and practitioners of medicine therein not complying with the provisions of Section 12 hereof, must successfully pass an examination before the said Board of Medical Examiners. They shall make a general average in all branches upon which examination shall be taken of not less than seventy-five per cent, and of not less than sixty per cent, in any branch. Each applicant, before taking such examination, must present satisfactory evidence to the board that he is over the age of twenty-one years, of good moral character, and a graduate of a reputable medical institution. An institution shall be considered reputable within the meaning of this act whose course of instruction embraces not less than four terms of six months each. Applications for examination must be made in writing, under oath, to the secretary of the board on forms prepared by the board, and shall be accompanied by a fee of twenty-five dollars. In event any applicant fails to pass the examination he shall be permitted to take a second examination without an additional fee.

Sec. 7. All examinations shall be in writing, and shall include anatomy, physiology, chemistry, histology, pathology, bacteriology physical diagnosis, surgery, obstetrics, gynecology, hygiene and medical jurispru-

dence. All questions and answers, with grades attached shall be preserved for one year. Licenses shall be signed by a majority of the members of the board, and the seal of the board, if a seal is adopted shall be affixed to said license.

Sec. 8. Said Board shall refuse to admit any applicants to its examinations, or to issue a license for any of the following causes: First: the presentation to the board of any license, certificate or diploma which was illegally or fraudulently obtained, or when fraud or deception has been practiced in passing a former examination, as a result of which said license or certificate or diploma was obtained. Second; conviction of a felony or a crime involving moral turpitude, or of procuring or aiding or abetting criminal abortion. Third; grossly unprofessional or dishonorable conduct. Fourth; for habits of intemperance or drug addiction calculated to endanger the lives of patients; provided that any applicant, refused admittance to examination before said board may on petition have his right of action to have such issue tried in the district court of the county in which some member of the board resides.

Sec. 9. Within thirty days after the issuance of a license by said board, or the validation thereof as hereinafter provided, it shall be the duty of the holder of such license to have the same recorded in the office of the county clerk of the county in which such holder resides or desires to practice; and in the event of his removal to another county he shall have his license recorded in such county. Any holder of a license who shall fail to have the same recorded as herein provided shall be guilty

of a misdemeanor, and upon conviction thereof shall be punished by a fine not exceeding fifty dollars and in default of the payment thereof, by imprisonment not to exceed thirty days.

Sec. 10. It is hereby made the duty of the county clerk of each county to purchase, at the expense of the county, a record book to be known at the "Medical Record" of such county, and to record therein licenses issued by said Board. The clerk shall receive a fee of one dollar for the recordation of each license. When the license of any physician shall be revoked by said Board, the secretary thereof shall certify such revocation to the county clerk of the county in which such physician is required to register his license, and said county clerk shall thereupon make a record of such revocation in said "Medical Record" at the place where such license is recorded. The county clerk of each county, on the first day of February, of each year, shall certify to the secretary of said board a correct list of the physicians registered in the county on said date. Any county clerk who shall fail or refuse to furnish such list, shall be guilty of a misdemeanor and upon conviction thereof be punished by a fine of not to exceed twenty-five dollars. The certificate of the county clerk as to the recordation or non-recordation of any license shall be admitted in evidence in all courts.

Sec. 11. All licenses granted or issued under the provisions of Chapter 68 of the Acts of the Thirty-sixth Legislative Assembly of the Territory of New Mexico, or under Chapter 34 of the Acts of the Thirty-seventh Legislative Assembly of the Territory of New Mexico, or under any law rel-

ative to the granting or issuance of licenses to practice medicine in New Mexico shall be and continue in full force and effect for one year after this act becomes a law, and no longer.

Sec. 12. Within one year after this act becomes law all practitioners of medicine in this state, who have been duly licensed, shall present the license or licenses so issued to them to said board, and said board shall thereupon issue a new license to the holder thereof, or validate the license or licenses so held, for which said board shall be entitled to charge and receive a fee of fifty cents. Said board may, in its discretion, arrange for reciprocity in licenses with the authorities of other state having requirements equal to those established by this act. Licenses may be granted applicants, under such reciprocal relations on payment of a fee of twenty-five dollars.

Sec. 13. Any person who shall practice medicine, or who shall attempt to practice medicine without first complying with the provisions of this law, and without being the holder of a license entitling him to practice medicine in this state, shall, upon conviction thereof, be punished by a fine of not less than fifty dollars nor more than five hundred dollars, or by imprisonment not exceeding six months, or by both such fine and imprisonment. Each day's violation shall constitute a separate offense. Any person violating the provisions of the section shall not be entitled to receive any compensation.

Sec. 14. The judges of the district courts shall, upon petition filed by the district attorney and upon satisfactory proof have power to revoke and cancel licenses for any of the following

causes; conviction of felony; grossly unprofessional or dishonorable conduct; habits of intemperance or drug addiction calculated to endanger the lives of patients; the selling of cocaine, morphine, chloral or other habit forming drugs to habitual users, or the prescribing of such drugs except for the purposes of alleviating pain or suffering.

Sec. 15. Any person shall be regarded as practicing medicine within the meaning of this act: (1) Who shall publicly profess to be a physician or surgeon, or who shall treat, or offer to treat, any disease or disorder, mental or physical, or any physical deformity or injury, by any system or method, or to effect cures thereof. (a) Or one who shall treat or offer to treat, any disease or disorder mental or physical, or any physical deformity or injury by any system or method or to effect cures thereof.

Sec. 16. This act shall not apply to dentists legally qualified and registered under the laws of this state who confine their practice strictly to dentistry; or to commissioned or contract surgeons of the United States Army, Navy or Public Health and Marine Hospital Service; or to legally qualified physicians of other states called in consultation but who do not open offices or appoint places in this state where patients may be received; or to gratuitous administration of home remedies; or to midwives who confine their practice to midwifery, or to voluntary services in cases of emergency.

Sec. 17. The terms "physician," "surgeon" and "practitioner of medicine" as used in this act shall be construed as synonymous.

Sec. 18. Nothing in this act shall

be construed to prohibit the practice of the art of healing the sick according to the religious tenets of any church, by mental or spiritual means without the use of any drug or material remedy, or otherwise, provided those who so practice shall have complied with the requirements of this act.

Sec. 19. Chapter 68 of the Acts of the 36th Legislative Assembly of the Territory of New Mexico and Chapter 34 of the Acts of the 37th Legislative Assembly of the Territory of New Mexico, and all acts and parts of acts in conflict herewith are hereby repealed.

CERTIFICATE

I hereby certify that the above is a true and correct copy of the Amended Substitute for House Bill No. 17 as the same was passed by both houses of the Legislature, and that it failed to become a law by reason of the fact that it was not approved by the Governor within six days after the adjournment of said Legislature.

FRANK STAPLIN,
Chief Clerk House.

A GOOD PHYSICIAN DESCRIBED

From a recent issue of the Kentucky Medical Journal we reprint the following:

Our attention has been called to a rather remarkable sermon, recently delivered by the Rev. C. A. Owens, of DeLand, Florida. The following are fragments from the sermon:

"It is one of the most important and oldest of the professions, dating back 3500 years before Christ.

"If a doctor would succeed in his

profession, he should let other business alone. I do not want a physician to wait on me who has other distracting matters on his mind, who has so many irons in the fire that he subordinates unconsciously perhaps his medical to other matters.

"Having temptations for evil and opportunities for good, more numerous than any other profession, medicine has some of the meanest and some of the best men in the world in its ranks. Above all others he most requires the grace of God.

"We want him to be trained, with a good college course, and four or more years as now required to get his medical diploma to practice. The profession itself is so regardful of its integrity as to provide the strictest examinations before skilled critics of the profession so that more and more we see the safeguards to our lives and health being erected by the profession itself, to whom we should be grateful for these protective measures.

"As a rule we should not put our puny knowledge above the diagnosis of our faithful family physician nor should we patronize or favor the foreign physician, who can have no such vital interest in our lives as has our home doctor.

"Jealousy among physicians is a curse, an almost universal defect—

"Trifles light as air, are the jealous heart, proofs strong as evidence of Holy Writ.

"There is need of friendlier feeling among them, as the public is apt to adopt the estimate they put upon each other, since a man rarely pays a higher price than the owner marks on his product.

"Our debts to our doctors are sac-

red. Through snow and rain and heat and cold they come to your stricken couch, themselves hungry, thirsty and weary ,to save you from providential afflictions or from the results of your own imprudence or rashness—therefore pay them what you owe them!

“No profession does so much charity work as the doctor ,and none has so many uncollectable accounts. Few ever refuse to wait on the sick at any time, while in pestilence, war or in sudden calamities the physicians form a noble volunteer army against death and disease.

“The time is coming when, instead of charging for treating the sick, the physicians will do as in China where they are salaried to keep individuals well! And when they fall ill, the doctor must treat them free.

“Let the doctors be clean in mind, in person, in speech, and have no pleasures in the counsels of the wicked

and ungodly. Let him never betray the family secrets lodged in his breast by trusting patrons. For such violations, he should be put in stripes.

“The physician should stand in the front ranks in moral reforms against the social vices, intemperance, and the enemies of the public health.

“Pray for your physicians, subject as he is to attacks of physical and moral sickness ,tempted as perhaps no other man is tempted.

“In your infancy, in your manhood and at your death bed he is beside you, patient, tender, sympathetic, faithful. As Luke was called the Beloved Physician, and the Great Physician, let their earthly prototypes ever remember their high and noble calling.”

It is important that the qualifications of the various professions and avocations of life be publicly discussed especially, from the pulpit. It is a pleasure to congratulate this Florida minister upon the discretion and skill with which he has undertaken this task.

PREVENTIVE MEDICINE

Dr. E. D. Strong, El Paso, Texas.

Read before the 2nd Annual Meeting of the Railway Surgeon's Association of the Southwest, El Paso, Texas, September, 1911.

Mr. President and Brother Members:

Railroads have ever been in the fore for safety and preventive measures, because of economic reasons if no other.

Hence the screen over the water gauge in engine cab, the block system of signals, the improved frog switch, car bumper, electric headlight, all steel cars, air brake, etc. They all save life and prevent accidents.

The Doctor can aid materially in suggestions and methods. Sanitary spittoons, or cuspidors, drinking cups, sanitary towels, tooth washing basins are along this line of thought. Also lectures, weekly or monthly, by division or local surgeons on ventilation of the car so that passengers do not have to trust to some capricious conductor or brakeman's whim or fancy, ventilation of employee's room or home or offices, lectures on pure water supplies, pure food supplies, bath, venereal diseases, likewise contagious diseases, tuberculosis and other infectious diseases, clothing; habits as applied to working efficiency, everyday cares and worries and their physical and mental effects. What constitutes a good night's rest and how to get it? What constitutes normal sexual life for either the married or single employee?

Doing away with plush upholstered

furniture, leather is better and more sanitary, would be a preventative measure and a great improvement.

Rules, that a porter shall—when possible—make down his berths when no occupants are in the care and likewise make up his berths so that his passengers do not have to occupy a space containing floating dirt and germ laden dust. Ways and means can be provided to hasten this improvement. The old way is both unsanitary and unhygienic. Dusting or brushing of clothes should be denied in the isles—can be done at the end of car with an open door so sustain draft without. If this gives trouble—under the present no vacuum methods, then let the passenger get off unbrushed rather than discommode the remaining occupants of the car.

Why not have the railroad install a vacuum cleaning outfit in each passenger train with attachments in each car to the main train line underneath—then the cars could be kept comparatively cleaner and healthier than at present.

With the present methods of control of faucets, I wonder that public conveyances like train service on railroad cars do not install the sanitary and hygienic kind. Did it ever occur to you that the danger of infection from the

diseased man—syphilis and gonorrhea and chancroids—who goes to the closet, with the same hands after attending to natures calls turns the faucets and leaves a residue thereon of probably more danger than if he had used a drinking cup.

The worst offenders for unsanitary and unhygienic conditions are not on the main but branch lines.

No carpets or rugs should be allowed on a train service unless there is also a vacuum outfit along which is in good working order.

I would suggest more frequent disinfection of railroad stations also toilets and car closets.

Each division should have a vacuum shed large enough to clean the whole cars freight or passenger or to disinfect by medicated air or steam pressure if necessary.

Who has not seen freight cars carrying eatables that were almost as dirty as a recently emptied cattle car.

We maintain that the medical profession of today is behind the times. We still maintain, many times, the egotism and dogmatisms of the clergy from whose side we derived our birth, is shown forth in the way we like to go it alone along old paths and hinder and impede anything new.

In our own every day practice we have too much curative surgery and medicine and so little of what we should have, preventive medicine.

We think that until venereal diseases are liable to quarantine, the general, as well as the railroad surgeon, will have one field of infection that will ever be a source of annoyance and a more continued field of practice of curative medicine.

If eighty five per cent of operations

upon the female sexual sphere are traceable to diseases that can be prevented and that are caused by ignorance, let us get to work.

Let us have more instruction given to the boys and girls at the time of puberty on the sexual question. We tell them when in the high school, all about themselves, every organ in the body, fully described, with its function etc., except those organs from which and by which future happiness and the next generation depends.

The instruction is left to Dr. Blank's family physician or some kindred work. Sometimes a baser source—a hired girl or man, much of the lewd mixed in with some of the meager facts, beget their knowledge.

What is indelibly printed on the young man's mind, ridicule or respect? What do the poor deluded innocents really know? Nothing, even instincts are blunted by the lewd thoughts engendered.

Doctor, do you always tell a patient how to avoid future troubles or worries or cares or pain or disease when you have his or her case? Or do you let him or her work out his or her own salvation and blindly stagger on? Do you wonder if he takes up with some new fad or fancy treatment or cult that offers advertised returns in a curative way.

If we had educated him and trained him by lectures and example we would not have this worry.

We ourselves are somewhat to blame. Eastern colleges are reluctantly establishing chairs of preventative medicine.

About ninety five per cent of medical college graduates are broken down in health upon their graduation as a

result of unhygienic living, bad habits, long hours, unsanitary quarters, brain craning, each specialist wishing each student to assimilate all that the professor has stuffed into the students mind.

Poor reading light is another cause of glasses and weak eyes. The dangers of infection and contagion among medical students, unless they are in the pink of physical condition, are many and varied. Did you ever know of any one amongst the faculty caring much or concerned about the student beyond whether he will pass his examinations.

State boards make the same mistakes. Health should be a prerequisite as well as mental attainments for graduation.

Every college should have a faculty appointed professor who should be responsible for the students individual health, then this same professor will see that practice and precept go hand in hand.

Deductions could be made from pathological cases in clinics when a student would not show an ability to apply the reasoning to himself; it should work the same as a *flunk* in an examination.

Then a doctor will be well enough balanced and coming under the tongue of good report sufficiently to teach and give instruction understandingly to his fellow man when he takes up his practice of either medicine or surgery.

He will have an ability to convince his patients that he knows what he is talking about.

Japan's preventative measures during their late war demonstrated to our army likewise to the world a lesson worthy of emulation.

The immobilization of troops dur-

ing the Spanish American war as compared with the last border immobilization at an Antonio is an example for comparison in putting the lesson to practical use.

Boards of health should be more observant and see less discrimination.

Milk bottles and dairies require a closer inspection. Second hand stores should be forced to fumigate all goods thoroughly that are bought before offering the same for sale.

All shoddy and sweat house goods should be disinfected and fumigated.

All kitchen and bakeries should be inspected and the employee's should have to show as clean a bill of health as a New Mexico or Arizona school teacher.

Saloons, drug stores and restaurants should be forced to clean all bottles, etc., and especially those rebought and used in their business.

Regulations of saloons should come under the medical department. References to statistics of asylums and hospitals, poorhouses and jails give us so much in accidents, troubles and diseases that are preventable and traceable to the sick alcoholic.

Regulation of prostitution, advice and instruction on how to prevent disease, as well as spreading the same.

Advice and instruction for the prevention of conception in certain cases, especially—for example—which is best, my suggestion in the case of a consumptive wife, or to let her go in ignorance, and endanger her life by going to full term or by interrupting pregnancy to save her life?

An ounce of prevention is worth a pound of cure. This statement will not appeal to the man responsible for her condition.

Banks should be required to fumigate or disinfect all monies in time of epidemics or contagion, or when suspicious cases have been known to have handled money or currency. This could apply to railroad offices as well.

I have been a member of a county board of health and realize what prevention and slipshod methods mean.

My own daughter was taken with measles, caught in a neighbor's home here in El Paso and unquarantined, etc., though attended by an El Paso physician. When I inquired why he did not quarantine, said "he did not think it necessary." The El Paso board of health are still going to prosecute the case.

"Pulls" and prevention are not partners. A case of diphtheria was quarantined, quarantine in time raised and so-called fumigation took place, family quite numerous, circulated promiscuously all through the neighborhood, a week and a half after the first quarantined was raised, another child comes down with diphtheria and card number two goes up.

Do not laugh, it is too serious, who can tell the outcome or the damage done, the inconvenience some family will be put to, altho they should happen to have had no deaths.

Doctors.—The trouble is amongst ourselves, we think more—its our bread and butter—about curative medicine, hence so little practice of preventive measures.

Some folks can only follow the concrete, the abstract seems to be beyond them.

North Dakota has a measure to be passed requiring a disinterested party to certify to the facts and con-

cur as to the necessity of a diagnosis, for operation before the operation will be allowed. This is to cut out the "faker" and "wallower" in the money mire and prevent the unnecessary operations.

Every state has good bills come up to become laws but preventive measures on railroads and mines or factories are not wanted unless their lobbyists can be shown, that it is worth while from an economic standpoint and will increase the earnings.

We have all probably read on page 972 of the American Medical Journal, September 6, 1911 the report of preventive medicine section committee.

The discussion which follows gives us much and many thoughts to digest.

Dr. Evans the chairman of the above committee it now editing a department of health in Chicago Tribune showing "How to live right and increase public interest." It is along a good line and in the right direction.

R. C. Newton of New Jersey sums up his article in the Journal of the A. M. A. "Improper clothing deforms the nipples of young girls." That our profession should bear the attitude of a firm refusal to countenance the marriage of any nippleless woman." It is the truth.

W. J. White in A. M. A. Journal article on "professional and public aspect of the pneumonia question" says that amongst other things "segregation of pneumonia patients and reporting same to the board of health with proper fumigation afterwards, should be done." It looks good.

When the next medical book publishing fellow appears, ask him for a book on preventative medicine. Let the "ologies" etc. rest a bit and the re-

sult—his answer—"we do not publish any books on preventive medicine, there are no calls for 'em." The time is surely coming, the dawn is lighting up in the east when such will not always be the case.

We still have men who are courageous enough to say what they think, follow the golden rule and give the other fellow a square deal. English and Canadian doctors are today practicing much preventive medicine, for the doctor is on a retainer fee, paid yearly, and its to his interest, besides his training, so to do.

Curative medicine will not lose out, 'twill gain, for the broader the outlook the easier the deductions.

On page 916 of September Journal

A. M. A. Sedgwick in his article on "The call to the scientific age" sums up the following "Hence the call of a scientific age for normal natural life and healthy living, hence its disapproval of disease, hence its disgust with dirt as a cause of disease and its belief in public health as well as private welfare.

Doctors how much better when we can deal more with the healthy patient and practice prevention and less with the pathological and diseased patient and practice curative medicine.

We will probably never in this world get wholly away from the latter but as we do we will be that much nearer our hearts desire.

Gentlemen, I thank you.

NEXT MEETING NEW MEX-
ICO MEDICAL SOCIETY, ROS-
WELL, SEPTEMBER 12th, 13th,
AND 14th, 1912.

BLOOD PRESSURE. A MISCELLANY

By Theodore Merrill, Colorado, Texas

Read Before the Mitchell County Medical Society, April 28th, 1912.

From the uncertainty of the indefinite, blood pressure methods in their clinical applications have advanced to acceptance among the usual necessities of the diagnostician. Although the subject has received considerable attention during the past several years, there are yet some points which may be profitably mentioned in the resume, and certain others which may be emphasized for their own sake. First, then, concerning apparatus and principles of its operation.

Blood pressure, or the pressure exerted by the circulating blood against the walls of the arterial tubing (for, clinically, determinations are restricted to the pressure in arteries) is measured by the effect of intra-arterial tension upon the mercury column, or upon a spring or elastic chamber whose readings are reduced to millimeters of mercury.

Mercury instruments, which for accuracy and permanence are far the best, are so constructed as to constitute open manometers, whose readings represent the difference between applied pressure and the local pressure of the atmosphere. Spring and like instruments, though corrected, as stated, to mercury readings, vary with the age and physical condition of the instrument (as in summer or winter) and gradually deteriorate. This fact necessitates frequent test and correction. The sole advantage such instruments

may possess over others is the occasional and insignificant one of portability and a slightly increased convenience in special applications such as observations, during withdrawal of the cerebro-spinal fluid. These advantages by no means compensate for the superior accuracy and permanence of the mercury instruments.

In order to be effective, blood pressure readings must ever be subject to correct interpretation. For this reason, it is important for the observer to bear constantly in mind factors which, separately or in combination, produce the resultant which appears as the reading. I trust I may be pardoned a brief summary.

Blood pressure considers the original cardiac impulse as modified by physical condition of the arteries, by vasomotorial innervation, and by the state of the blood. Physical condition of the veins and capillaries is also influential, as briefly described further on.

The physical condition of the arteries includes the status of the coats separately or combined. The adventitia may be diseased or may share in a disease-process, as in the fibrosis of age; the media, or muscular layer, has its obvious relations, while the intima is of conspicuous importance in this regard. Endarteritis, as seen in syphilis thrombotic states or aneurism, at once suggests itself. Arteries as wholes

may suffer compression by inflammation, by tumors, or by hyperplasia of interstitial tissue.

Vasomotorial innervation alone is a large factor. Whether influenced by such transitory agencies as emotional stimuli, or whether modified by the pressure of tumors, by reflex results of toxicity, by shock, by other gross or minute disease affecting the nervous system, or by drugs, innervation should suggest itself at almost every occasion of estimating blood pressure. Particularly should the temporary increase frequently due to psychic conditions be borne in mind by the life insurance examiner, who, from the same cause, may occasionally notice also a lowered pressure.

Thus, in a male subject aged 28, of robust build, not apparently neurotic, an initial reading gave 118 systolic and 98 diastolic. In an attempt to verify this finding by a second estimation the systolic record reached 106. At this stage of the observation the subject remarked that he thought he would be unable to continue. His face quickly became very pale, perspiration appeared on the surface and the man was evidently much prostrated. I immediately released the instrument from his arm. He then vomited copiously and was compelled to lie down for half an hour before he could leave the office. This individual was intelligent, seemingly not frightened, and had no discoverable heart lesion.

The state of the blood also, is not unimportant, including as it does the fluidity (viscosity), content of gases, haemic disease, circulating toxins, variation in normal solids dissolved, presence of bacteria or parasites, and existence of drugs, serums or other

foreign substances.

According to some classifications, the factors influencing pressure are given as four in number, viz., cardiac energy, peripheral resistance, elasticity of the arterial walls, and volume of the blood. Careful consideration will reveal the laxity of such a description. For instance, peripheral resistance depends upon condition of the coats, separately or together, in various anatomical locations. Elasticity of the arterial walls also depends upon the same factor. Volume of the blood results from causes intrinsic, partially from causes extrinsic to it, extrinsic influences affecting it directly through the arterial wall. It is understood that influences already mentioned as affecting arteries should be remembered in connection with capillaries and veins, with due reference to differences in histology.

This short sketch indicates the complexity possibly involved in the final determination, and prepares for consideration of the blood pressure instrument in detail.

The open manometer obviously gives a differential reading. When the local atmosphere is permitted access to the mercury in both arms of the U tube, the same level obtains in either arm because equal weights of air per square unit rest upon the respective mercurial surfaces. When applied for estimation, there is a continuous air-column between the arteries measured and the mercury in one arm of the U tube. In use this continuous air-column serves to furnish a pressure exceeding that of the blood and acts also as a piston by which the intravascular pressure is applied to mercury in one arm of the U tube.

Whatever force induces this tension will press up the mercury correspondingly in the other arm; and the mercury, when thus forced up, rises against the weight of the air that rests upon it.

Accordingly, this fact raises the question of the essential effect of altitude upon the reading, regardless of factors in any way connected with a individual whose blood pressure is observed. For, as the altitude is greater, the weight of air resting upon the open mercurial surface is less, so that a reading taken at a high altitude would seem to be greater in millimeters than one taken at a lower level. This, in fact, is true for a theoretical condition requiring atmospheric stillness, and for purposes of calculation is expressed according to the following formula, in which the relations of the barometric pressure (b) at height (h) meters above sea level are indicated:—

$H=18420 (\log p - \log b) (1 + .004 t)$, p being pressure at sea level and t the mean of the temperatures at the two stations. The blood pressure reading is inversely as that of the barometer.

Practically, we are relieved from the trouble of such calculation from the fact that winds, storms, and other atmospheric disturbances render the density nearly uniform, or at least prevent a variation regular in proportion to the altitude. But for this minor advantage of atmospheric stirring, there would be no escape from tiresome mathematics. Of course the coefficient for any altitude, once obtained, could be applied to all readings taken in that altitude, (neglecting temperature differences), or instruments could be standardized. Either condition

would seriously impair the usefulness of the determination.

Conceding then, the value of the mercury instrument recognizing the simplicity of its principle, and neglecting minor variations in portability and strength, interest may well be centered upon the cuff or rubber bag which is inflated when applied to the arm.

In an able article, Lankford (Texas State Journal, Nov. 1st, 1911), insists that this bag should be at least five and one half inches wide. Taussig recommends an instrument in which the width of the bag is four inches. A good width is certainly necessary, and in the writer's experience four inches is not too small. A bag of this width can be applied to any arm and does not form a cord when inflated. Its results appear to be dependable.

Readings

Except for special purposes, these are taken from arteries and should be systolic and diastolic. In practice, however, the systolic reading only is usual.

Differences in reading may occur according to muscular development, but to a comparatively slight degree. Thus, readings taken from the right arm are commonly higher than those taken from the left; but it is well to bear in mind the fact that this rule is not absolute.

According to Taussig (Interstate Med. Journal XVIII, 6) the average difference between systolic and diastolic reading is 40 to 45 mm. In 33 observations on girl students, results appeared as shown by the table:—

	R	L
Average systole	112.6	108.0
Average diastole	97.0	91.7

Difference	15.6	16.3
Average difference	15.95	

The students in question offered conditions strikingly uniform in matters dietary, hygienic, etc., and their ages varied from 14 to 22.

In another series of 28 observations, inclusive of all ages from 15 to 72, all conditions of life, and both sexes, readings were tabulated as follows:—

	R	L
Average systole	114.0	111.9
Average diastole	90.6	94.0
Difference	23.4	17.9
Average difference		20.65

These averages show the effect of age in raising the pressure and apparently indicate another result of age, viz., departure of the systolic from the diastolic reading. Considering the fact that the first series represents excellent athletic development, it is interesting to notice that, in proportion to age, the diastolic pressure is higher than in the second, or unselected, series. It should be added that both series represent only normal individuals.

The limit of 160 mm., although commonly considered as marking the extreme of normal pressure in adults cannot be positively stated to constitute a sharply defining index. Roger Lee (*Journal A. M. A.* LVII—15), and Taussig (*Interstate Med. Journal* XVIII—16) are said to be somewhat too positive in naming 160 mm. as the limit. Especially must this fact be remembered in neurasthenics, in whom fatigue may cause a pressure of 170 or 180.

Infections

Pressure as studied in various diseases yields considerable variety of

opinion. Particularly in pneumonia is there divergence. Gibson's rule (*Journal A. M. A.* LVII—23) while not universally recognized, seems, on the whole, to have many supporters. According to this rule, prognosis is good if the arterial pressure in mm. of mercury does not fall below the pulse rate in beats per minute; prognosis is bad when the converse of the rule obtains, i. e., if the pulse-rate exceeds the pressure the equilibrium of the circulation is seriously disturbed.

Hare considers continual watch of the blood pressure in pneumonia to be of the highest importance, in order that signal to stimulate may be timely. Probably diversity of opinion as to the value of blood pressure readings in infectious processes depends upon the wide variation occurring in toxic conditions. Such variation in pressure may be very great when toxemia complicates as in nephritis, arteriosclerosis, eclampsia, or other forms, such as uncomplicated intoxication from the intestine.

Special Applications

Notably in life insurance examinations does the estimation of blood pressure find a legitimate place. Readings too high or too low may in themselves pronounce for exclusion. The claim is made that readings abnormally low indicate incipient tuberculosis. Readings over 160, unless specially explained, suffice to exclude the risk. A high reading in the absence of arteriosclerosis almost positively indicates the presence of nephritis.

From these facts, blood pressure estimations are doubly valuable in life insurance work, first for their own indications, and second as a check upon concomitant findings.

A second special application of blood pressure is seen in its use in connection with lumbar puncture. As here practiced, the pressure is noted before, during and after withdrawal of the cerebro-spinal fluid and its replacement by serum, e. g., an anti-meningococcic serum. The pressure is not permitted to fall more than about 20 mm. in a vigorous adult, nor more than 8 or 10 mm. in a child. 4 or 5 mm. might suffice in a child 1 to 3 years of age or younger.

Arteriosclerosis

Results with blood pressure in this condition have been highly valuable because they have emphasized a prominent characteristic of the pathology, viz., variation of the arteriosclerotic process in different arteries. Thus, the brachials may be normal while the cerebrals are on the verge of rupture.

There may sometimes be low pressure in hard arteries or high pressure in normal arteries. It is important to remember that high pressure does not necessarily mean arteriosclerosis. Palpation of the femorals, temporals, and other accessible arteries will do much to assist in the detection of the process. The arcus senilis suggests itself along the same line, and study of the urine reciprocates with the pressure in importance. In a paper of this length it is impossible to do more than indicate the main trend of thought under the topics selected each of which is daily receiving minuter attention in the steadily increasing studies and literature. In closing I wish to make due acknowledgement of courtesies and assistance received from the faculty and students of Simmons college, and from Professor Albert Palmer of Brown University.

NEXT MEETING NEW MEXICO MEDICAL SOCIETY, ROSWELL, SEPTEMBER 12th, 13th, AND 14th, 1912.

CHRONIC DIARRHOEA

Elliott C. Prentiss, M. S., M. D., El Paso, Texas.

Read before the 30th Annual Session of the New Mexico Medical Society,
East Las Vegas, N. M., September 6th—9th, 1911.

To the internist cases of chronic diarrhoea are notably unsatisfactory, yet the results are frequently good when treatment is based upon the findings of a careful examination. Many cases are, owing to their etiology, of course incurable, but some of these may be temporarily benefitted or rendered more comfortable.

In chronic diarrhoea there are abnormal frequency and thin consistency of the stools, due to increased peristalsis, alteration of secretion and absorption and decomposition of food remnants. There is also a serous exudate from the intestinal wall, which has a tendency to putrefy.

This subject forms a very good illustration of vicious circle, of which the factors are diminished digestive secretion, diminished absorption of food, with resulting decomposition and catarrh. Alterations of secretion and absorption may exist for a long time without causing decomposition and catarrh. I had a very good instance of this recently. A gentleman brought his wife to me for examination and treatment, and she would not let me pass the stomach tube. To show her that it could be done, he had me pass it on him. The ordinary breakfast removed contained no HCL, pepsin or lab ferment. Here was probably a case of achylia gastrica in a man who had never had in-

digestion. Such cases are not as rare as ordinarily supposed. In these cases intestinal digestion compensates for absent stomach secretion, but when this fails chronic diarrhoea usually results.

A careful history is of great importance, especially the part relating to the development of the condition. Tropical infections easily become chronic, and where there is such a record, the stools should be carefully searched for protozoa.

Uncinariasis is not rare among the poorer element of Mexicans, but I have examined the stools of a number of well to-do Americans suspected of having it, with negative results. Bacillary dysentery is found here and when suspected, cultures should be made. Chronic diarrhoea may also result from chronic peritonitis, amyloid disease of the intestines, cirrhosis of the liver, uremia, typhoid fever, and passive congestion. Sometimes the origin of the case will date back to early life. Some cases are made worse by definite articles of food and drink, or by other conditions such as cooling of the abdomen, anger, nervous strain or worry. One case I saw did not yield to treatment until we found out that the patient had been using a seat through which cold air circulated from below, upon correcting this, recovery soon followed. Instances of students

having diarrhoea before and during examinations are common. I once had a patient who had diarrhoea following the slightest unpleasantness at the table. A very obstinate case was that of a European who had taken a large amount of Epsom Salts to keep from being drafted into the army. A diagnosis of cholera was made at the time. It resulted in severe chronic gastro-enteric catarrh.

The existence of pulmonary tuberculosis would arouse the suspicion of intestinal ulceration. Blood and leucocytes should be sought for in the stools. The finding of tubercle bacilli is not of much value.

A careful abdominal examination is of course, necessary in all cases. The most important part of the examination is the testing of the functions of the digestive apparatus. Many cases of diarrhoea are secondary to stomach affections, such as diminished motility, atony, stenosis, ptosis, periodical decomposition of food, and anomalies of secretion. Several gastric analyses should be made. Cases of chronic diarrhoea complicating achylia gastrica are not rare and frequently yield readily to diet and administration of hydrochloric acid. The intestinal functions should next be carefully studied. A stool from the usual mixed diet should be examined then one from a test diet. There are several test diets for the study of the intestinal functions such as those of Schmidt and Strauss. Schmidt limits the diet to milk, tea, cocoa, rolls, butter, eggs, oatmeal-gruel, chopped rare beef, potato puree and soup. A five (5) grain capsule of carmine is given and the first stool after the red appears, is examined.

This also shows how long it takes food to pass through the alimentary tract. An organic disease of the intestinal wall can be diagnosed only when there is mucus, blood or pus present. Dissolved mucus is not present in the stools. Thick mucus in various forms points to disease of the colon, while thin mucus suggests some affection of the small intestines. The quantity of the mucus is not an accurate guide to the intensity of the lesion. The severity of the inflammation is usually proportional to the number of cells, especially leucocytes, present in the mucus. Pus and macroscopically recognizable fresh blood generally come from the lower part of the colon. The proctoscope should be of assistance in such cases. An examination should always be made for occult blood. To make this test of value, bleeding from the mouth, nose, throat and rectum should be excluded. Traces of blood found then would, of course, come from the oesophagus, stomach or intestines.

In the absence of mucus and blood, the constant presence of foul stools with dissolved albumen would speak for an inflammatory or ulcerative condition.

When the diarrhoea is recognized as functional we must determine which function is at fault. The motor function is ascertained by giving a five (5) grain capsule of carmine as mentioned above. This demonstrates the time it takes food to pass the entire alimentary tract, not the intestines alone.

Marked cases of diarrhoea may occur in adults without the absorption of proteids and carbohydrates being seriously diminished. The presence of undigested food remnants speaks for di-

minished absorption. The absorption of fat may be diminished by disease of the mucous membrane of the intestines mesenteric glands and lymph passages, and also by alteration of the secretion of bile and pancreatic juice. The appearance in the test diet stool of considerable connective tissue speaks for gastric sub- or anacidity, hyperacidity or increased peristalsis. Macroscopically recognizable muscle tissue suggests diminished tryptic digestion. With complete absence of ferments muscle nuclei are present; Schmidt's bag test is based upon this fact.

Fat stools should be examined for bile and muscle fibres to determine their relation to the pancreatic secretion. The presence of icterus would suggest absence or diminution of the bile. Fat stools with presence of bile and good digestion of meat would suggest diminished intestinal absorption.

To examine for bile, a small piece of feces is rubbed in a mortar with water and corrosive sublimate. Urobilin shows a pink color, while bilirubin becomes green. There is some doubt about the value of this test. Gmelin's test is more reliable. Normally, what bile and coloring matter there is in the feces in the form of urobilin, (hydrobilirubin); When the motor function of the large intestine is increased upon using the sublimate test, small food particles appear stained green, while if the small intestine is also involved, the whole specimen will become green. In marked cases of diminished carbohydrate absorption, the stools are light colored, soft, have acid reaction, sour odor and are fluffy with gas. Upon rubbing with water potato remnants are found in marked cases, while in mild cases starch cells

are found only with the microscope, after staining with iodine solution. The cause is diminution in the secretion of the pancreatic and intestinal ferments. The relation between secretory disturbances and inflammatory conditions of the intestinal mucous membrane is important. The former may exist for a long time before diarrhoea or intestinal catarrh occurs. Alteration of carbohydrates leads most easily to catarrh. When marked catarrh occurs, it generally obscures other aspects of the case. This catarrh in turn aggravates other conditions; it diminishes the secretions, even of the large glands, also absorption and hastens peristalsis. The effect will be more marked the higher in the intestines the catarrh is located. In high-seated catarrh of the small intestine considerable undigested food appears in the stools; in low-seated less; high-seated catarrh of the colon affects the consistency only, undigested food particles not being present. If deep-seated only, the consistency is unaltered and inflammatory products are passed with fecal masses. We must bear in mind that combinations of these usually exist. When catarrh and alteration of secretions are present, it should be determined which existed first. If under treatment, or during spontaneous remissions, the catarrhal symptoms disappear, while undigested food still continues to be passed, the primary condition is probably secretory and vice versa. Schmidt believes that chronic diarrhoea is more frequently caused by alteration of secretion than by primary catarrh. When the latter holds one should suspect some infection, such as tuberculosis, dysentery or worms, or a latent stenosis or slowly

growing carcinoma. Intestinal catarrh may be caused by yeast, sarcinae, long bacilli, and bacillus proteus or other organisms, which originate from some stomach affection. Such a condition may remain even after the stomach affection has been relieved.

Chronic diarrhoea frequently causes general and local disturbances which may, in themselves, be serious. One of the most important of these is auto-intoxication, and it may be manifested by mental depression, extreme nervousness, neurasthenia, insomnia, headache, general debility and in many other ways. Riggs disease, which

Forchheimer claims occurs in about 60 per cent of cases of auto-intoxication, is of no small moment, as proper mastication of food is of great importance in these cases. Anaemia may occur and be accompanied by neuralgia especially the facial form. Intestinal catarrh predisposes to intestinal infections of all kinds, and by lowering a patient's vitality, predisposes to general infections.

The longer a chronic diarrhoea continues, the more marked are the lesions apt to be, and the less rapidly will it respond to treatment.

NEXT MEETING NEW MEX- ICO MEDICAL SOCIETY, ROS- WELL, SEPTEMBER 12th, 13th, AND 14th, 1912.
--

TREATMENT OF PIN WORMS

"Treatment should take into consideration two distinct points: namely, not only the removal of the gravid female pinworms from the rectum, but also the removal of the younger worms from the small intestine. A failure to consider this latter point doubtless explains not a few cases of treatment which have not met with the success the practitioner expected. Still, the emphatic statement so often met with, that persistence is an essential factor in favorable results, is often justified.

"For removing the younger pinworms from the small intestine, several drugs may be used, as santonin and calomel (of each 0.05 to 0.1 grm—3-4 to 11-2 grains) given several days in succession, or large potions of an infusion of gentian, or active saline cathartics repeated several days in succession, or thymol or beta-naphthol. Ungar gives immediately after a laxative, four doses per day of naphthalin (0.1 grams—2 to 6 grains) according to age, for two or three days in succession between meals.

"To expel the gravid females from the rectum, rectal injections are used. An infusion of quassia seems to be one of the most popular remedies. Other commonly used enemata are: lime-water, aloes, diluted vinegar (which should be sterilized before using otherwise the patient may become infected with vinegar-ells), perchloride of iron, glycerine, benzine, (20 drops to a pint of warm water), finally chopped garlic with water (which has stood for 12 hours and then strained through linen). Diluted Carbolic enemata are advised by a number of authors, but they do not seem to have any special advantage over the other

drugs and have in some cases decidedly poisonous effects.

"The injections are given with the buttocks elevated, or the knee chest position, at first every evening, then every two or three or four evenings, until all evidence of worms has disappeared. If too large an injection is given to be retained this washes out a number of worms; but it should be followed by a smaller injection, two to four ounces, or an amount which can be conveniently held.

"Ointments of various kinds may be applied in the evenings to the anus and perineum to relieve the itching."—Ky. Medical Journal June 1st, 1911.

In the Journal of the Indiana State Medical Society in an article on Typhoid perforation and its surgical treatment, Grassie states that in a series of 4230 cases studied by Scott at the Pennsylvania Hospital, there were 349 deaths, 110 cases of perforation or 31.5%. According to Osler "the probability of recovery without operation after perforation of the bowel in typhoid fever is not worthy of consideration." About 20% of the cases coming to early operation are saved.

The symptoms of perforation of a typhoid ulcer are sudden acute pain, vomiting, tenderness, collapse, and on such evidence a surgeon should be called.

Dr. Emerson, Dean of the Indiana University Medical School, reports that in the John Hopkins Hospital they operated on suspicion. Their records show that they operated one half as often without finding perforations, but did not hesitate to operate on suspicion. He says the operation is not such a serious matter, as often it

changes a severe into a mild case, causing as it were, an autogenous vaccination of the patient.

The typhoid cases in the hospital are visited every night. A typical case is where the patient is comfortable, but complains of a sharp pain in the abdomen every few seconds or a minute.

The next point is that he will turn over comfortably and go to sleep, and if the doctor rouses him he will be angry. That is a typical case of perforation in typhoid fever.

They have a blood count made every half hour to get the increase in the leucocytes.

H. M. C.

SOME OFFICIAL DRUGS AND PREPARATIONS

One of the foremost aids in the relief and cure of sickness and disease is the mastery of drug combinations. Some drugs act best alone but in the majority of cases a drug's action is often greatly augmented by being combined with others to assist its action to correct any undesirable action or in making a more palatable mixture.

A study of the compound preparations in the Pharmacopoeia and the National Formulary, especially in the latter, affords many striking examples of such methods of combination and these are worthy of most careful study; this will greatly aid the medical practitioner in devising his own prescriptions.

Consider the Patient First

While the tendency of the times for some reason or other may be towards simple (or single) medicaments, and away from the compound and complex, there is danger, however, in carrying this simplicity too far, for there

is no doubt that proper combinations of medicines will often produce effects for the patient's good which could not be obtained from the use of any one remedy separately.

An example may be taken in Castor Oil, which well illustrates two points: First, its disuse by many physicians owing to its objectionable taste, and second, how to overcome this taste by combination. Castor Oil is a valuable remedy and in making a palatable dose, we "kill two birds with one stone," namely, we save to the profession a valuable drug, and we also produce a mixture agreeable to the patient.

In the National Formulary there is official Emulsion of Castor Oil (Emulsion Olei Ricini, N. F.), which is really a very fine and palatable preparation. It contains 32 per cent of Castor Oil, emulsified with Acacia and Water, sweetened with Syrup and flavored with Vanilla. Usually the pharmacist may be allowed to use his discretion in preparing a palatable mixture of this nature, but it is well that physicians be familiar with the contents of such. Close co-operation with the pharmacist is of great benefit in such cases.

A Castor Oil Prescription

The physician may desire a different emulsion for a patient that the N. F. preparations yields and in that case he might prescribe Castor Oil emulsified with yolk of egg and flavored with Ginger and Cinnamon. Such a prescription would appear as follows.

Olei Ricini—ounces 1

Vitelli—1

Syrupi Zingiberis—drachms 4

Aquae Cinnamomi, ad—ounces 4

Again, a physician may wish to pre-

scribe for a case of bedsores and having in mind the use of Balsam or Peru and Iodoform, would prescribe an ointment containing these drugs, mixed possibly with lard or petrolatum. Now either lard nor petrolatum alone will make a good ointment with these drugs, but if a little Solid Petrox (Petrolatum Saponatum Spissum, N. F.), Castor Oil or Wool Fat be added a very fine ointment will result.

A Special Laxative

There may arise an occasion when the general laxatives might not meet the physiological conditions present, especially when a tonic laxative seems to be indicated; such as in acne rosacea, erythema multiformae urticaria, etc. By combining common table salt and Sulphate of Iron with Epsom Salt, a very good mixture will result, somewhat after the following formula:

Magnesii sulphatis—drachms 1
 Ferri sulphatis—grains 4
 Sodii Chloridi—drachms $\frac{1}{2}$
 Acidi sulphurici diluti—drachms 1
 Infusi Quassiae, ad—ounces 4.

Such a mixture may be given in tablespoonful doses in a glass of water about half an hour before breakfast, to patients who are robust and where conditions would demand such a com-

Again Asafetida may be indicated but the physician is loth to prescribe it. Its horrid taste, combined with the fact that this drug formerly was only of indifferent quality, has placed this therapeutic agent on the back shelf as useless. However, the quality has lately much improved and by specifying the drug of the Pharmacopoeia, a good article may be secured. Palatability is secured by prescribing as follows:

Asafetidae, U. S. P.—drachms 5
 Syrupi Tolutani—ounces 3
 Tincturae Vanillae—drachms 2
 Olei Anisi—minims 30
 Aquae Cinnamomi, ad—ounces 16

The average dose of this would be one tablespoonful. When such a prescription is handed the pharmacist, he will proceed and make an emulsion of the Asafetida with Cinnamon Water. The flavors and sweetening are present in such a mixture to produce a very satisfactory preparation and one that is palatable.

The case of Phenolphthalein offers another instance where a special prescription is most valuable. This drug is often prescribed in the objectionable tablet form and also appears in the form of a specialty under various fanciful names. By combining it with aromatics as in the following prescription a palatable and most active therapeutic mixture may be obtained.

Phenolphthalein—drachms 3
 Alcoholis—ounces 1
 Elixir Taraxaci Compositi—ounces 2
 Elixir Aromatici, ad—ounces 8

This elixir contains nearly 3 grains of Phenolphthalein to a teaspoonful dose. The dose, may of course, be varied as required.

The drug may also be prescribed with chocolate syrup, which yields a most excellent and palatable preparation; also as a compound pill prescribed with small quantities of extracts of Cascara Sagrada, Nux Vomica and Belladonna. Instead of the pill form, the mixed powders may be enclosed in capsules.

Syrupus Rhei et Potassii Compositus,
 N. F.

The Compound Syrup of Rhubarb

and Potassa or as it is frequently called, Neutralizing Cordial, has marked powers as an antacid and carminative stomachic. As its formula will indicate, its application has a wide range of usefulness in various stomach and intestinal ailments. The average dose of this syrup is 4 Cc. (1 fluidram). Each dose represents approximately $\frac{1}{2}$ grain of Golden Seal, $\frac{1}{2}$ minim of Spirit of

Peppermint, 1 grain each of Rhubarb, Potassium Carbonate and Cinnamon, and 13 grains of sugar. The Alcohol content is 40 per cent.

This palatable preparation is deserving of great popularity. Many practitioners use it in combination with Pancreatin, some with Nux Vomica and Bromides and various other combinations are useful.

Next Meeting
New Mexico
Medical Society
Roswell, September 12th, 13th,
and 14th, 1912

BOOK REVIEW

THE TREATMENT OF SHORT-SIGHT

By Prof. Dr. J. Hirschberg

Geh. Med. rat in Berlin.

Translated by

G. Lindsay Johnson, M. D., F. R. C. S.

With 12 illustrations, \$1.25 net.

Rebman Company New York

Dr. J. Hirschberg's lecture on short sight is one of the most complete, compact and easily comprehended publication on the subject one can find.

While it only covers 120 pages we do not find one that is not to the point and it is a book that will be of great value not alone to the man who confines his work to the eye alone, but to the general practitioner as well, as the seriousness of this trouble of short sightedness should be recognized by all medical men and an effort made to control it to the greatest possible degree.

This lecture covers years of observation and study with statistics and cases reported that few men have the opportunity to observe and should be found in the library of every practicing physician as well as the oculist and if read and studied by them the book will have "double value not only guiding them to correct myopia in a scientific manner, but, what is far more important, by pointing out the dangers and pitfalls which beset those who attempt to correct high degrees of myopia, without possessing that special knowledge which only a large experience of eye diseases can obtain." —(Johnson.)

Dr. Hirschberg's statistics and reports on the ill effects of high degree of near sightedness on the cornea, lense, vitrious, retina and fundus of the eye will cause the less experienced practitioner to be more careful in handling these cases and also more guarded in his prognosis. That portion of his lecture bearing on surgical interference should be studied by all physicians doing eye work and the point made that they are not operations for beginners, but for the practiced hand is one that should always be kept in mind.

The doctor's theory of short sight does not differ materially from that of other authors and should be of interest to all medical men and especially to the student of the eye.

The last section of the lecture which is directed to the care of the short sighted eye in school work is the one that I feel is of equal importance as compared with other points brought out and if we could have an outline of it placed in all our schools so the teacher could aid us in this work, giving the students the benefit of advice regarding the care of the eyes, especially as short sight is induced or aggravated by too close application of the eyes during the developing stage.

OPERATIVE OBSTETRICS

Operative Obstetrics, including the Surgery of the Newborn. By Edward P. Davis, M. D., Professor of Obstetrics. Jefferson Medical College, Philadelphia. Octavo volume of 483 pages, with 264 illustrations. Phila-

delphia and London: W. B. Saunders Company, 1911. Cloth, \$5.50 net.

Doctor Davis' book will be a most welcome addition to our literature, appealing to both general practitioner and specialist.

The real hard word in obstetrics comes to the general practitioner, particularly the country practitioner, remote from hospitals and often from skilled assistance. Dr. Davis has sought in his book to put before the general practitioner the obstetric operations in a concise and condensed manner, leaving out nothing of importance and yet not over burdening the work with unnecessary detail. The author has accomplished this in an admirable manner.

Following some general introductory sections, the author discusses the Surgery of Pregnancy; Surgery of Labor; Surgery of the Puerperal Period; Surgery of the New Born.

An extensive bibliography follows each section.

The printing and illustrating are done in Saunders usual splendid manner.

HOME NURSE'S HANDBOOK OF PRACTICAL NURSING

Home Nurse's Handbook of Practical Nursing. A Manual for use in

Home Nursing Classes, in Young Women's Christian Associations in Schools for Girls and Young Women, and a working text-book for mothers, "practical" nurses, trained attendants, and all who have the responsibility of the home care of the sick. By Charlotte A. Aikens, Author of "Hospital Management," "Hospital Training-School Methods," "Primary Studies for Nurses," "Clinical Studies for Nurses" 12mo of 276 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1912. Cloth, \$1.50 net.

This volume deals with home nursing and is a most timely work. It is a practical work and as such will appeal to the great army of general practitioners who have long wanted some such work to hand to the mother or daughter of a family where nursing has to be done by "home folks."

The author tells us that it is the result of years of experience in hospital work where one sees "the results of maternal ignorance of the laws of health and sanitary living, ignorance of the rudiments of proper management when signs of illness manifest themselves in the home circle."

Special attention has been given to the care of babies and maternity nursing—a most commendable chapter.

The New Mexico Medical Journal

Volume VIII

JULY, 1912

No. 4

E · D · I · T · O · R · I · A · L

The New Mexico Medical Journal is not responsible for the opinions expressed by any of its contributors.

To the members of the New Mexico Medical Society:

We are desirous of making this the banner year for our society, and appeal to all members to resolve themselves into a committee of one, influencing all qualified physicians of the state not already members to affiliate with the society. Many are not conveniently situated to affiliate with county societies, and being residents of the state should be urged to identify themselves with us, and made to feel that we welcome them, and need their assistance in building up the standard of the profession of our new state. Many physicians have located in our state in the past year. Many of these will, no doubt, make valuable members of our society, and should be urged to identify themselves with us.

Fraternally,

R. V. BRADLEY,

Pres. N. M. M. S.

THE ROSWELL MEETING

The coming meeting of the New Mexico Medical Society at Roswell in September should be one of record. We hope to be able to add materially to our membership at that time and it behooves all good members of the New Mexico Medical Society to do mission-

ary work among the eligible practitioners in the State with a view to obtaining their application for membership.

On another page will be found the requirements for membership in counties where no county society exists. (Constitution and By-Laws.)

Members intending to present papers at this meeting will confer a favor on the Secretary if they will send in the title of the paper to the secretary at as an early date as possible.

THE COUNTY SOCIETY SECRETARY

From time to time the Secretary of the New Mexico Medical Society by personal communication and through the columns of the Journal, has called the attention of the secretaries of the various county societies to the necessity of making full and complete report of the membership of their societies. Few have responded and the secretary finds his records incomplete. Every few days there comes a letter from the Secretary of the American Medical Association asking information about some practitioner in the State who is an applicant for membership in the American Medical Association yet whose name does not appear on our

list of members on file in the offices of the American Medical Association. In no case has the secretary of the New Mexico Medical Society found himself at fault but in several instances he has found that the applicant was a member of a county society the secretary of which had failed to notify the State secretary of the fact.

Twice within the past three weeks have subscriptions come to the Journal from physicians who complained that they did not receive the Journal and wanted it. In each instance it was stated that they were members of a component county society and investigation proved the truth of the statement yet the State secretary had not been notified. This works an injustice to the members and to the New Mexico Medical Society as well. Secretaries should report promptly and often.

The absence of any reference to county matters in the columns of the Journal is another thing to be charged to the county secretary. The Journal will publish all county news regularly if it is sent in, but it is never sent in—at least it has failed to reach the Journal office. Please get busy Mr. County Secretary. Read section 13 of chapter 9 of the By-Laws.

MEDICAL DEFENSE.

At the annual meeting of the Association of State Secretaries and Editors at Atlantic City during the time of the last meeting of the American Medical Association the question of Medical Defense was taken up and thoroughly discussed. The reports were encouraging. We believe that the House of Delegates at the Roswell

meeting of our own state society could approach the subject for the benefit of the New Mexico Medical Society. A committee should be appointed to look into the matter and report at the 1913 meeting with recommendations.

THE MEDICAL BILL.

In writing upon the first medical law passed by the first Legislature of the State of New Mexico, and the character of it, it would be better to refer first to the law as published in the Journal for June, which is from a certified copy and which failed of approval by the Governor.

The history of this Bill is as follows: At the time the original Bill drafted by the Society came up, two physicians took it upon themselves to appear before the Judiciary Committee and endeavor to pass the same. Considerable opposition was developed regarding the Bill and considerable argument by all schools, and more especially by the Christian Scientist who had a paid attorney present. The Judiciary Committee was very fair in dealing with everybody and finally asked the two members of the regular profession just what they wished in a Medical Act. Their answer was that every one claiming to practice medicine should show by examination their fitness for the license, and that a positive and definite definition of unprofessional conduct should be made. The representatives of the medical profession were then asked if the Texas law would suit them; on examining the said law the reply was that it would. The Texas law is practically the same as the law that was passed, with but

few exceptions, and those of a minor nature.

At the time of this conference an incident occurred which was without parallel in legislative proceedings. Senator Barth of Bernalillo county came before the Committee without being asked and begged to be heard, and while admitting before the Committee that he did not employ Christian Science, made a strong plea for absolute exemption of this cult from any restriction whatever.

The Committee then introduced Amended House Bill No. 17 which was published last month, and which upon the last day of the session was passed by both Houses and sent to the Governor. The Bill required his signature within a week before the same should become a law. At no time during this week did the Governor ever ask how the physicians felt upon the law, but claimed:—

"The fact that it was intended to prohibit not only the Christian Scientists so-called but anyone else who saw fit to "treat" in any manner, seemed to me to be too sweeping and was intended not to be altogether fair to these people and the public generally.

"You know what the conditions are in New Mexico and how difficult it is for a large number of our population to have a good physician where he can be readily obtained when needed. The next to the last paragraph of that Bill has a proviso which can have but one meaning to my mind, that is not in accord with the legislation in a great many of our States."

These objections were covered fully by the Bill, as will be seen under Sec-

tion 16, last paragraph, and his objection to Section 18 was not reasonable.

My own feeling is that the Legislature did its duty, that it met the physicians more than half way; that it has given them a Bill which, while it may not meet with the approval of everybody, yet is stringent enough to cover the question, and is not special legislation in the sense of favoring any one particular branch of medicine.

To the credit of this Legislature be it said that they were perfectly willing to ask questions, weigh the answers, interpose objections, and at the same time consider with care the replies to those objections. It would be impossible to specify by name all those who were favorable to the Bill, but I regret to say that there were some men of intelligence, men who themselves have no use for this cult, men who were told before voting against the Bill that Section 16 did not apply to the native people, that it was the same Section as existed in the old Bill; had been on the statute books for over 18 years, and the practice of the Board in the past had been to favor all such conditions that were in this Bill especially provided for.

The fault of this Bill not becoming a law does not lie with the Legislature. The Legislature—in both branches—were fair and just, and the Bill passed just as reported from the Committee without any change, and by a large majority. The above is a plain statement of facts as they occurred and with this editorial and a copy of the Bill before you it is up to the profession to decide what they care to do.

J. H. W.

OPHTHALMIA NEONATORUM

We again call the attention of the profession to preventable blindness. There will be another session of the State legislature in January next and the first bill that the profession should ask for and work for and "stay wit'it" is a bill that will look to the eradication of gonorrhoeal ophthalmia.

It is said that from 25% to 40% of all cases of blindness are due to this disease and when we reflect that this is a preventable disease, the shame of it ought to come home to each one of us. A most excellent article appears in the June 1912 Medical Review of Reviews which we have before us, and from it we learn that the "State health authorities of Massachusetts, New Jersey and Vermont are authorized to supply prophylactic materials to physicians for use in their obstetric work. Rhode Island, New York and the District of Columbia are also prepared to issue such prophylactic outfits to doctors, midwives or nurses who may desire them."

The pity of it! Is there a physician so dead to his duty and to his profession who needs a State Board of Health to furnish him with a simple 2% solution of silver nitrate?

By all means let the legislative committee get to work preparing a bill along the lines of the A. M. A. committee's report on Gonorrhoeal Ophthalmia and be ready to push it to a successful issue before the next legislature.

Mc B

Elsewhere in this issue will be found the Constitution and By-Laws of the New Mexico Medical Society. Several changes of importance have occur-

red in them since they were first adopted at Las Vegas in 1905. We would suggest a careful reading of them on the part of the members of the New Mexico Medical Society in order that they may become familiar.

THE FEE BILL.

In an able editorial in the June 1912 issue of the New York Medical Journal, William Brady discusses the "Doctor's Bill." While the entire editorial is too long for reproduction at this time, we cannot help commending it, for it reaches the spot. The doctor deplores the practice of well-to-do doctors rendering gratuitous service to the "pay-as-you-please-class," and adds, "Some of the so-called leaders of the profession may be found the worst offenders against the spirit of the principles of ethics in this matter of cutting fees."

Itemized bills are "unwise and unnecessary" further than stating the date and nature of the service rendered. We should make a practice of charging for the case according to the value of the service rendered rather than for each individual visit or consultation. In this connection the writer takes occasion to pay his respects to the fee bill, which, he holds (and in our opinion rightly) is an instrument to be retained in the hands of the practitioner as a guide in fixing charges and which should never, under any circumstances, be made public. Publication of a medical fee bill is on a par "with a butcher's tariff for various cuts of meat" and "medical societies forget the dignity of their function when they offer fee bills to the public press."

Just here we want to call the attention of our readers to a clause that is

found in the by-laws of the component county societies of the New Mexico Medical Society, and of all county societies in affiliation with the American Medical Association so far as we know dealing with this question of a fee bill. Section three of Chapter two reads as follows:

"Agreements and schedules of fees shall not be made by this society, but at least one meeting during each year shall be set apart for a discussion of the business affairs of the profession of the county, with the view of adopting the best methods for the guidance of all. In all proper ways the public shall be taught that business methods and prompt collections are essential to the equipment of the modern physician and surgeon, and that it suffers even more than the profession when this is not recognized."

By way of parenthesis, and lest we forget, it might not be amiss here to quote section four of the same chapter, which says:

"This Society shall endeavor to educate its members to the belief that the physician should be a leader in his community, in character, in learning, in dignified and manly bearing, and in courteous and open treatment of his brother physicians, to the end that the profession may occupy that place in its own and the public estimation to which it is entitled."

The writer of the editorial in the New York Journal asks the pertinent question, "Does the fee bill force the cheap man to charge a reasonable fee?" He answers it as follows: "Not at all; it boosts his business interest among the very class he caters to. A fee bill, if it is to serve any good pur-

pose, should be held sacredly confidential among ourselves."

Water seeks its own level and a physician's place in a community is judged by the man himself and by his work, not by the fee bill that he might follow. The cheap man sooner or later comes to his end as does the fakir and the grand stand player. A man's services should be measured by the class of work he does and by nothing else.

"It is an excellent tonic to have occasional bargain hunters desert you for a cheaper man. It stimulates your self esteem, and it increases the deserter's respect for you. They often come back. The force of psychology brings them back; they reason that a man who charges a given fee must be worth it. Every practitioner of medicine must set his own price and make his own reputation. To drift along with the ill advised intention of weeding out some day is a very doubtful policy to pursue; weeds grow faster than good plants, and choke off the good plants in time. The thrifty gardener keeps the weeds down from the beginning. Better to content yourself with a \$3,000 practice, eighty per cent collectible, than to struggle with a \$5,000 practice, only fifty per cent good"

McB

CHAVEZ COUNTY MEDICAL SOCIETY NOTES.

On June 6th, 1912 at a regular meeting of the Chaves County Medical Society the following officers were elected:

President, Dr. C. F. Montgomery.

Vice-President, Dr. H. A. Ingalls.

Secretary-Treasurer, Dr. H. V. Fall

Members of the Board of Censors for three years Dr. J. W. Kinsinger.

Delegate to the New Mexico Medical Society for two years Dr. C. F. Beeson.

Dr. Joyner returned Wednesday July 10th from Santa Fe, where he has been in attendance at the State Board Meeting.

Congratulations to Dr. E. M. Fisher, who returned June 29th from an extended wedding tour through the East.

The Pecos Valley Medical Association met at Clovis, New Mexico June 12-13th. An excellent program was given. Much credit is due the management for the able manner in which the

program had been arranged and for the fine hospitality shown. This Association is a district society, composed of the County societies of Chaves, Eddy, Roosevelt, Curry and Lincoln Counties. The Association is active and is doing much for the betterment of the cause of organized medicine. The following officers were elected for the ensuing year:

Dr. A. G. Van Almen of Clovis, New Mexico, President.

Dr. C. F. Montgomery, Roswell, New Mexico, Secretary.

The next meeting to be held in Roswell in December, 1912.

Next Meeting
New Mexico
Medical Society
Roswell, September 12th, 13th,
and 14th, 1912

Constitution and By-Laws of New Mexico Medical Society

CONSTITUTION

ARTICLE I.—NAME OF THE SOCIETY.

The name and title of this organization shall be the New Mexico Medical Society.

ARTICLE II.—PURPOSES OF THE SOCIETY.

The purposes of this Society shall be to federate and bring into one compact organization the entire medical profession of the State of New Mexico, and to unite with similar societies of other states to form the American Medical Association; to extend medical knowledge and advance medical science; to elevate the standard of medical education, and to secure the enactment and enforcement of just medical laws; to promote friendly intercourse among physicians; to guard and foster the material interests of its members and to protect them against imposition; and to enlighten and direct public opinion in regard to the great problems of state medicine, so that the profession shall become more capable and honorable within itself, and more useful to the public, in the prevention and cure of disease, and in prolonging and adding comfort to life.

ARTICLE III.—COMPONENT SOCIETIES.

Component Societies shall be those

county medical societies which hold charters from this society.

ARTICLE IV.—COMPOSITION OF THE SOCIETY.

SECTION 1. This Society shall consist of Members, Delegates and Guests.

SEC. 2. MEMBERS. The members of this Society shall be of good moral and professional character, graduates of a reputable medical school and licensed practitioners of the state and shall be members of the component county medical societies when such societies exist; when there is no county society, qualified practitioners may be elected to membership by the House of Delegates.

SEC. 3. DELEGATES. Delegates shall be members who are elected in accordance with this Constitution and By-Laws to represent their respective component societies in the House of Delegates of this Society.

SEC. 4. GUESTS. Any distinguished physician not a resident of this State, who is a member of his own State Association, may become a guest during any Annual Session on invitation of the officers of this Society, and shall be accorded the privilege of participating in all of the scientific work for that Session.

ARTICLE V.—HOUSE OF DELEGATES

The House of Delegates shall be

the legislative body of the Society, and shall consist of: (1) Delegates elected by the component county societies; (2) the Councilors; and (3) *ex-officio*, the President and Secretary of this Society.

ARTICLE VI.—COUNCIL.

The Council shall consist of the Councilors, and the President and Secretary, *ex-officio*. Besides its duties mentioned in the By-Laws, it shall constitute the Finance Committee of the House of Delegates. Three Councilors shall constitute a quorum.

ARTICLE VII.—SECTIONS AND DISTRICT SOCIETIES.

The House of Delegates may provide for a division of the scientific work of the Society into appropriate Sections, and for the organization of such Councilor District Societies as will promote the best interests of the profession, such societies to be composed exclusively of members of component county societies, when such societies exist.

ARTICLE VIII.—SESSIONS AND MEETINGS.

SECTION 1. The Society shall hold an Annual Session, during which there shall be held daily General Meetings, which shall be open to all registered members and guests.

SEC. 2. The time and place for holding such Annual Session shall be fixed by the House of Delegates.

ARTICLE IX.—OFFICERS.

SECTION 1. The officers of this Society shall be a President, three Vice-Presidents, a Secretary, a Treasurer and three Councilors.

SEC. 2. The officers, except the Councilors, shall be elected annually. The terms of the Councilors shall be for three years, those first elected serving one, two and three years, as may be arranged, so that after the first year one Councilor shall be elected annually to serve three years. All these officers shall serve until their successors are elected and installed.

ARTICLE X.—RECIPROCITY OF MEMBERSHIP WITH OTHER STATE ASSOCIATIONS.

All applicants for membership, regardless of societies or associations that they may belong to or from which they may bring cards, shall be elected as any other members and each county society is hereby authorized to require a certain number of months (not less than six) residence before admitting to membership provided that all other requirements of the Constitution and By-Laws be complied with.

ARTICLE XI.—FUNDS AND EXPENSES.

Funds shall be raised by an equal per capita assessment on each component society. The amount of the assessment shall be fixed by the House of Delegates, but shall not exceed the sum of \$3.00 per capita per annum, except on a four-fifths vote of the Delegates present. Funds may also be raised by voluntary contributions, from the Society's publications, and in any other manner approved by the House of Delegates. Funds may be appropriated by the House of Delegates to defray the expenses of the Society for publications, as for such

other purposes as will promote the welfare of the profession. All resolutions appropriating funds must be referred to the Finance Committee before action is taken thereon.

ARTICLE XII.—REFERENDUM.

SECTION 1. A General Meeting of the Society may, by a two-thirds vote of the members present, order a general referendum on any question pending before the House of Delegates, and when so ordered the House of Delegates shall submit such question to the members of the Society, who may vote by mail or in person, and, if the members voting shall comprise a majority of all the members of the Society, a majority of such vote shall determine the question and be binding on the House of Delegates.

SEC. 2. The House of Delegates may, by a two-thirds vote of its own members, submit any question before

it to a general referendum, as provided in the preceding section and the result shall be binding on the House of Delegates.

ARTICLE XIII.—THE SEAL.

The Society shall have a common Seal, with power to break, change or renew the same at pleasure.

ARTICLE XIV—AMENDMENTS.

The House of Delegates may amend any article of this Constitution by a two-thirds vote of the Delegates present at any Annual Session, provided that such amendment shall have been presented in open meeting at the previous Annual Session, and that it shall have been published twice during the year in the bulletin or journal of this Society, or sent officially to each component society at least two months before the meeting at which final action is to be taken.

BY-LAWS

CHAPTER I.—MEMBERSHIP

SECTION 1. The name of a physician on the properly certified roster of members of a component society, which has paid its annual assessment, and which requires each applicant to be of good moral character, a graduate of a medical school in good repute and a licensed practitioner of the territory, shall be *prima facie* evidence of membership in this Society.

SEC. 2. Any person who is under sentence of suspension or expulsion from a component society, or whose name has been dropped from its roll of members, shall not be entitled to any of the rights or benefits of this

Society, nor shall he be permitted to take part in any of its proceedings until he has been relieved of such disability.

SEC. 3. Each member in attendance at the Annual Session shall enter his name on the registration book, indicating the component society of which he is a member. When his right to membership has been verified, by reference to the roster of his society, he shall receive a badge, which shall be evidence of his right to all the privileges of membership at that Session. No member shall take part in any of the proceedings of an Annual Session until he has complied with the provisions of this section.

SEC. 4. In counties where no society exists, practitioners who are qualified for membership in such societies may be elected to membership in the New Mexico Medical Society on filing application and a fee of \$5.00 with the Council for investigation, who, in turn, will refer it to the House of Delegates for action.

CHAPTER II.—ANNUAL AND SPECIAL SESSIONS OF THE SOCIETY

SECTION 1. The Society shall hold an Annual Session at such time and place as has been fixed at the preceding Annual Session by the House of Delegates.

SEC. 2. Special meetings of either the Society or of the House of Delegates shall be called by the President on petition of three delegates or twenty members.

CHAPTER III.—GENERAL MEETINGS

SECTION 1. All registered members may attend and participate in the proceedings and discussions of the General Meetings and of the Sections. The General Meetings shall be presided over by the President or by one of the Vice-Presidents, and before them shall be heard the address of the President and the orations, and such scientific papers and discussion as may be arranged for in the program.

SEC. 2. The General Meeting may recommend to the House of Delegates the appointment of committees or commissions for scientific investigation of special interest and importance to the profession and public.

CHAPTER IV.—HOUSE OF DELEGATES

SEC. 1. The House of Delegates shall meet before the Annual Session.

It may adjourn from time to time as may be necessary to complete its business, provided, that its hours shall conflict as little as possible with the General Meetings. The order of business shall be arranged as a separate section of the program.

SEC. 2. Each component county society shall be entitled to send to the House of Delegates each year one delegate for every 10 members, and one for each major portion thereof, but each component society which has made its annual report and paid its assessment as provided in this Constitution and By-Laws, shall be entitled to one delegate.

SEC. 3. Three Delegates shall constitute a quorum.

SEC. 4. It shall, through its officers, Council and otherwise, give diligent attention to and foster the scientific work and spirit of the Society, and shall constantly study and strive to make each Annual Session a stepping stone to future ones of higher interest.

SEC. 5. It shall consider and advise as to the material interests of the profession, and of the public in those important matters wherein it is dependent upon the profession, and shall use its influence to secure and enforce all proper medical and public health legislation, and to diffuse popular information in relation thereto.

SEC. 6. It shall make careful inquiry into the condition of the profession of each county in the State, and shall have authority to adopt such methods as may be deemed most efficient for building up and increasing the interest in such county societies as already exist, and for organizing the

profession in counties where societies do not exist. It shall especially and systematically endeavor to promote friendly intercourse among physicians of the same locality, and shall continue these efforts until every physician in every county of the State who can be made reputable has been brought under medical society influence.

SEC. 7. It shall encourage post-graduate and research work, as well as home study, and shall endeavor to have the results utilized and intelligently discussed in the county societies.

SEC. 8. It shall elect representatives to the House of Delegates of the Americal Medical Association in accordance with the Constitution of that body.

SEC. 9. It shall divide the State into Councilor Districts, specifying what counties each district shall include, and, when the best interest of the Society and profession will be promoted thereby, organize in each a district medical society, and all members of component county societies shall be members in such district societies. When so organized, from the presidents of such district societies shall be chosen the Vice-Presidents of this Society, and the presidents of the county societies of the district shall be the vice-presidents of such district societies.

SEC. 10. It shall have authority to appoint committees for special purposes from among members of the Society who are not members of the House of Delegates. Such committees shall report to the House of Delegates, and may be present and participate in the debate on their reports.

SEC. 11. It shall approve all memorials and resolutions issued in the name of the Society before they shall become effective.

CHAPTER V.—ELECTION OF OFFICERS

SECTION 1. All elections shall be by ballot, and a majority of the votes cast shall be necessary to elect.

SEC. 2. The election of officers shall be the first order of business of the House of Delegates after the reading of the minutes on the morning of the last day of the General Session. Only those in attendance at the Annual Session at which the election occurs shall be eligible for election.

SEC. 3. Any person known to have solicited votes for or sought any office within the gift of this Society shall be ineligible for any office for two years.

SEC. 4. Delegates shall not be eligible to the office of President.

SEC. 5. In case of absence from regular meetings of any of the Councilors, the House of Delegates shall elect a member from the unrepresented district to serve for that meeting only.

CHAPTER VI.—DUTIES OF OFFICERS

SECTION 1. The President shall preside at all meetings of the Society and of the House of Delegates; shall appoint all committees not otherwise provided for; he shall deliver an annual address at such time as may be arranged, and perform such other duties as custom and parliamentary usage may require. He shall be the real head of the profession of the State during his term of office, and, as far as practicable, shall visit by appointment the various sections of the State, and assist the councilors in building

up the county societies, and in making their work more practical and useful. He shall be an active, voting member of the Council.

SEC. 2. The Vice-President shall assist the President in the discharge of his duties. In the event of the President's death, resignation or removal, the Council shall select one of the Vice-Presidents to succeed him.

SEC. 3. The Treasurer shall give bond in the sum of \$250.00. He shall demand and receive all funds due the Society, together with bequests and donations. He shall pay money out of the Treasury only on a written order of the President, countersigned by the Secretary; he shall subject his accounts to such examination as the House of Delegates may order, and he shall annually render an account of his doings and of the state of the funds in his hands.

SEC. 4. The Secretary shall attend the General Meetings of the Society and the meetings of the House of Delegates and shall keep minutes of their respective proceedings in separate record books. He shall be an active member and Secretary of the Council with a vote. He shall be custodian of all record books and papers belonging to the Society, except such as properly belongs to the Treasurer, and shall keep account of and promptly turn over to the Treasurer all funds of the Society which come into his hands. He shall provide for the registration of the members and delegates at the Annual Sessions. He shall, with the cooperation of the secretaries of the component societies, keep a card-index register of all the legal practitioners of the State by counties, noting on

each his status in relation to his county society, and, on request, shall transmit a copy of this list to the American Medical Association. He shall aid the Councilors in the organization and improvement of the county societies and in the extension of the power and usefulness of this Association. He shall conduct the official correspondence notifying members of meetings, officers of their election and committees of their appointment and duties. He shall employ such assistants as may be ordered by the House of Delegates, and shall make an annual report to the House of Delegates. He shall supply each component society with the necessary blanks for making their annual reports; shall keep an account with the component societies, charging against each society its assessment, collect the same, and at once turn it over to the Treasurer. Acting with the Committee on Scientific Work, he shall prepare and issue all programs. The amount of his salary shall be fixed by the House of Delegates.

CHAPTER VII.—COUNCIL

SECTION 1. The Council shall meet preceding the Annual Session, and daily during the Session, and at such other times as necessity may require, subject to the call of the chairman, or on petition of three Councilors.. It shall meet on the last day of the Annual Session of the Society to organize and outline work for the ensuing year. It shall elect a chairman and a clerk, who, in the absence of the Secretary of the Society, shall keep a record of its proceedings. It shall, through its chairman, make an annual report to the House of Delegates.

SEC. 2. Each Councilor shall be

organizer, peacemaker and censor for his district. He shall visit the counties in his district at least once a year for the purpose of organizing component societies where none exists; for inquiring into the condition of the profession, and for improving and increasing the zeal of the county societies and their members. He shall make an annual report of his work and of the condition of the profession of each county in his district at the Annual Session of the House of Delegates.

SEC. 3. The Council shall be the board of censors of the Society. It shall consider all questions involving the rights and standing of members, whether in relation to other members, to the component societies or to this Society. All questions of an ethical nature brought before the House of Delegates or the General Meeting shall be referred to the Council without discussion. It shall hear and decide all questions of discipline affecting the conduct of members or component societies on which an appeal is taken from the decision of an individual Councilor, and its decision in all such matters shall be final.

SEC. 4. In sparsely settled sections it shall have authority to organize the physicians of two or more counties into societies, to be suitably designated so as to distinguish them from district societies, when organized and chartered, shall be entitled to all rights and privileges provided for component societies until such counties shall be organized separately.

SEC. 5. The Council shall provide for and superintend the publication and distribution of all proceedings, transactions and memoirs of the As-

sociation, and shall have authority to appoint an editor and such assistants as it deems necessary. All money received by the Council and its agents, resulting from the discharge of duties assigned to them, must be paid to the Treasurer of the Society. It shall annually audit the accounts of the Treasurer and Secretary and other agents of this Society and present a statement of the same in its annual report to the House of Delegates, which report shall also specify the character and cost of all publications of the Society during the year, and the amount of all other property belonging to the Society under its control, with such suggestions as it may deem necessary. In the event of a vacancy in the office of the Secretary, or of the Treasurer, the Council shall fill the vacancy until the next annual election.

CHAPTER VIII.—COMMITTEES

SECTION 1. The standing committees shall be as follows:

A Committee on Scientific Work.

A Committee on Public Policy and Legislation.

A Committee on Arrangement, and such other committees as may be necessary. Such committees shall be elected by the House of Delegates, unless otherwise provided.

SEC. 2. The Committee on Scientific Work shall consist of three members, of which the Secretary shall be one, and shall determine the character and scope of the scientific proceedings of the Society for each session, subject to the instructions of the House of Delegates. Thirty days previous to each Annual Session it shall prepare and issue a program announcing the

order in which papers and discussions shall be presented.

SEC. 3. The Committee on Public Policy and Legislation shall consist of a member of each county society appointed by the President upon the advice of and confirmed by the Council, the President and Secretary being active and voting members. Under the direction of the House of Delegates it shall represent the Society in securing and enforcing legislation in the interest of public health and of scientific medicine. It shall keep in touch with professional and public opinion, shall endeavor to shape legislation so as to secure the best results for the whole people, and shall strive to organize professional influence so as to promote the general good of the community in local, state and national affairs and elections.

SEC. 4. The Committee on Arrangements shall be appointed by the component society of the county in which the Annual Session is to be held. It shall provide suitable accommodations for the meeting places of the Society and of the House of Delegates, and of their respective committees, and shall have general charge of all the arrangements. Its chairman shall report an outline of the arrangements to the Secretary for publication in the program, and shall make additional announcements during the session as occasion may require.

CHAPTER IX.—COUNTY SOCIETIES

SECTION 1. All county societies now in affiliation with this Society or those which may hereafter be organized in this State, which have adopted principles of organization not in con-

flict with this Constitution and By-Laws, shall, on application, receive a charter from and become a component part of this society.

SEC. 2. As rapidly as can be done after the adoption of this Constitution and By-Laws, a medical society shall be organized in every county in the State in which no component society exists, and charters shall be issued thereto.

SEC. 3. Charters shall be issued only upon approval of the Council and shall be signed by the President and Secretary of this Society. Upon the recommendation of the Council the House of Delegates may revoke the charter of any component society whose actions are in conflict with the letter or spirit of this Constitution and By-Laws.

SEC. 4. Only one component medical society shall be chartered in any county. Where more than one society exists, friendly overtures and concessions shall be made, with the aid of the Councilor for the District if necessary and all of the members brought into one organization. In case of failure to unite, an appeal may be made to the Council, which shall decide what action shall be taken.

SEC. 5. Each county society shall judge of the qualification of its own members; but, as such societies are the only portals to this Society and to the American Medical Association, every reputable and legally registered physician who is a graduate of a medical school in good repute and who does not practice or claim to practice, nor lend his support to, any exclusive system of medicine, shall be entitled to membership. Before a charter is is-

sued to any county society, full and ample notice and opportunity shall be given to every physician in the county to become a member.

SEC. 6. Any physician who may feel aggrieved by the action of the society of his county in refusing him membership, or in suspending or expelling him, shall have the right to appeal to the Council, and its decision shall be final.

SEC. 7. In hearing appeals the Council may admit oral or written evidence as in its judgment will best and most fairly present the facts, but in case of every appeal, both as a Board and as individual Councilors in district and county work, efforts at conciliation and compromise shall precede all such hearings.

SEC. 8. When a member in good standing in a component society moves to another county in this State, his name, on request, shall be transferred without cost to the roster of the county society into whose jurisdiction he moves.

SEC. 9. A physician living near a county line may hold his membership in that county most convenient for him to attend, on permission of the component society in whose jurisdiction he resides.

SEC. 10. Each component society shall have general direction of the affairs of the profession in its county, and its influence shall be constantly exerted for bettering the scientific, moral and material condition of every physician in the county; and systematic efforts shall be made by each member, and by the society as a whole to increase the membership until it

embraces every qualified physician in the county.

SEC. 11. At some meeting in advance of the Annual Session of this Society each county society shall elect a delegate or delegates to represent it in the House of Delegates of this Society, in the proportion of one delegate to each ten members and one for each major fraction thereof, and the Secretary of the Society shall send a list of such delegates to the Secretary of this Society, at least ten days before the Annual Sessions.

SEC. 12. The Secretary of each component society shall keep a roster of its members, and of the non-affiliated registered physicians of the county, in which shall be shown the full name, address, college and date of graduation, date of license to practice in this State, and such other information as may be deemed necessary. In keeping such roster the Secretary shall note any changes in the personnel of the profession by death, or by removal to or from the county and in making his annual report he shall endeavor to account for every physician who has lived in the county during the year.

SEC. 13. The Secretary of each component society shall forward its assessment, together with its roster of officers and members, list of delegates, and list of non-affiliated physicians of the county, to the Secretary of this Society each year thirty days before the Annual Session.

SEC. 14. Any county society which fails to pay its assessment, or make the report required, on or before the first day of the Annual Session shall be held as suspended, and none of its

members or delegates shall be permitted to participate in any of the business or proceedings of the House of Delegates until such requirements have been met.

CHAPTER X.—MISCELLANEOUS

SECTION 1. No address or paper before the Society except those of the President and orators, shall occupy more than twenty minutes in its delivery; and no member shall speak longer than five minutes, nor more than once on any subject, except by unanimous consent.

SEC. 2. All papers read before the Society or any of the Sections shall become its property. Each paper shall be deposited with the Secretary when read.

SEC. 3. The deliberations of this Society shall be governed by parliamentary usage as contained in Roberts' Rules of Order, when not in conflict with this Constitution and By-Laws.

SEC. 4. The Principles of Medical Ethics of the American Medical Association shall govern the conduct of members in their relations to each other and to the public.

CHAPTER XI.—AMENDMENTS

These By-Laws may be amended by any Annual Session by a majority vote of all the delegates present at that session, after the amendment has laid on the table for one day.

Next Meeting
New Mexico
Medical Society
Roswell, September 12th, 13th,
and 14th, 1912

The Relation of Psychology to Medicine

Abstract of an address delivered before the Bernalillo County Medical Society March 20, 1912. By Mendel Silber, M. D., Albuquerque, N. M.

The pendulum of progress in medicine has within the last few decades swung from one extreme to the other. Until a comparatively recent and modern date empiricism reigned supreme. If the presence of some herb or plant happened to coincide with a change in the condition of a patient that herb or plant was considered the all-efficient cause, and implicit faith was placed in the efficacy of the all-curing power of that object. This sort of thing fitted in well with the prevailing conception of things, for nothing was deemed impossible that seemed plausible. In modern times medicine became impatient of empiricism. Forgetting its limitations it began to imitate the exact sciences. Pathology and Bacteriology occupy a place of primary importance, and the means of ascertaining the cause of disease are everywhere given the preference to those of ascertaining the cure. We act as if the business of the physician were chiefly to satisfy his curiosity and not to affect a cure. A great deal of fun is had at the expense of the old-time physician who is a strict believer in and a strong advocate of the quinine and calomel class of cures.

The one source of study and investigation which has not even been taken into consideration is Psychology, the study of the normal mind, the laws underlying thought, the relation of the mental to the physical and physiological parts in man. It is to this ignorance of or indifference to psychologi-

cal laws that the existence of quacks, fakers, charlatans, Christian Scientists and panaceists of all kinds is mainly due. The physician himself often plays into the hands of these. When the physician fails to recognize the interrelation between mind and body he opens the door to fakes and quacks and irregularities in medicine. When the physician fails to realize how much the mind depends upon the body and how much more the body depends upon the mind, he becomes responsible for the public's straying from the straight path and for the people's seeking after strange gods.

It has certainly occurred to everyone of us that while no one is born great, that while no one is born a poet, a musician, a scientist, a statesman, an inventor or a discoverer, yet the physical parts and organs with which one is born and the physiological functions of these make it possible for one to become great. The mind of the poet, the musician, etc., positively depends upon the bodily organism and function. *Mens sana in corpore sana* is more than a clever aphorism. We all know what an impediment to thought impaired metabolism is; we know what an important part neural normality, unhampered circulation, pure respiration and good alimentation, absorption, and digestion play in the *modus operandi* of thinking. We also know to what degree the mere removal of the thyroid gland affects one's mentality, at times transforming a normal and intelligent be-

ing into an imbecile. But has it ever occurred to us also that in functional troubles, that is, excepting surgical maladies, infectious diseases, and organic disturbances or derangements, the mind and not the body is really the seat of the lesion? Do we ever stop to consider the part that fear, imagination, emotionalism and morbid brooding play in the functional ailments of our patients? Suppose Dr. Smith is called at 2 o'clock in the morning to see Mr. Jones who, he is told is in a very serious condition. He dresses in a great hurry and, half-awake, panting for breath, he arrives at Mr. Jones' bedside. He meets the sad and sullen looks of the family and approaches the patient whom he finds in a terrible state of excitement. Upon inquiry he learns that there is something wrong with Mr. Jones' heart. In fact, Grandma Jones died of heart disease, and there can be no doubt that Mr. Jones is fast going the same way. The physician examines carefully, listens to the heart, takes the temperature and feels the pulse. He is unable to discover any organic lesion, but the heart beats at the rate of one hundred and twenty a minute. What will Dr. Smith do under such circumstances? In ninety-nine cases out of a hundred he will assume an habitually grave and sanctimonious air, look over the frightened and agitated family circle, count the heart beats again, only to find that they have increased from one hundred and twenty to a hundred and forty, prescribe some Digitalis and give some one instructions to hurry with it to the corner drug store where by all means the night clerk is to be awakened. He, Dr. Smith would come again five hours later. When the

doctor arrives the second time he finds his patient much worse. Our good physician then wonders what may really be the trouble with Mr. Jones. —Why, nothing at all. The trouble lies with Dr. Smith and not with Patient Jones. Had Smith possessed the least knowledge of psychology, Jones might be well now. Had he borne a cheerful air, had he encouraged the patient and asserted that there was positively no danger, that no one ever died of a similar condition, had he then spent an hour in easy, unrestrained and pleasant conversation, the heart would have calmed down, the pulse would have grown slower, the patient quieter and refreshing sleep would have followed for the remainder of the night.

But, of course, not knowing the dependence of the body upon the mind, not knowing the width and breadth of emotions, not knowing the diffusion of fear, or the depth and danger of auto suggestion, how could he suspect that his patient's condition was probably due to the half-realized influence of a nightmare, aggravated and exaggerated by fear and emotion? How was he to know the innumerable cases of auto-suggestion which are a matter of every-day occurrence, necessitated by psychological laws and resting upon psychological principles? Unless, therefore, the physician learns to estimate at their true worth and value these laws and principles, he will not, even though he know everything else, be able to cope or compete with the various kinds and conditions of fakers or quacks who may know nothing else, but are able to control the human body through the influence of the human mind.

ARTERIAL PRESSURE

By Charles Turner Sands, M. D., Las Cruces, N. M.

From the earliest era in medical history our special branch of endeavor has been known and spoken of as one of the arts, and at the present day degrees are still conferred in the "Art of Medicine." Whether or not the treatment of the sick ever becomes a science it is impossible to say; but in spite of all that has been done and is being done, we must admit that medicine is still an art and likely to remain so for many generations to come. The problems presented by even the apparently simplest pathological processes involve factors so complex and so interwoven with other ever changing factors that the human intelligence, in its present development at least, is unable to grasp them all and bring them into harmony. In spite of this steps are ever being taken toward a fuller comprehension of vital phenomena and these are always toward greater accuracy and the formulation of fundamental laws. Instruments of precision are being continually devised which are in themselves marvels of adaptability, and by their aid we can know as facts, what our predecessors had to accept as theories, or had no conception of whatever. There is a growing tendency to adopt the methods and procedures of the physiological and pathological laboratories into daily clinical work. We express the temperature accurately on a standard scale of degrees, anaemia in percentage of haemoglobin and the pulsation of the heart

itself is arrested for us and made to trace its autograph on the drum of the sphygmograph. These procedures and the many similar to them, all speak for greater accuracy which is the foundation stone of all true knowledge. The day of generalities is drawing to its close.

As we have become dissatisfied with skill in the individual observer alone—that something in him which cannot be available for others and which perishes with him—we have come to rely more and more upon instrumental means for recording observations and analyzing the clinical puzzle-picture into its component parts. The need for skill is just as insistent; but with these means the present generation can begin where the elder generation left off and utilize their skill in advancing rather than in toilsomely going over ground already covered.

Until the sphygmomanometer was devised it was impossible to describe accurately the sensations experienced in palpating the pulse; the terms hard, soft and the like were wholly relative and their interpretation left a wide margin for the imagination to work upon. There was no possibility for the recognition of slight changes, except after years of patient practice, and no means of expressing these changes so that they would become intelligible to others. Much of this inaccuracy has been obviated by the use of apparatus whereby arterial pressure can be

expressed numerically in millimeters of mercury. These instruments are far from perfect, and the results obtained frequently require guarded interpretation; but on the whole they have been a most valuable means toward clearing up many obscurities in physiology and pathology, and their more extended use has given us an undoubted aid in diagnosis, prognosis and treatment.

It is the purpose of this paper to review some of the more important facts we possess relating to arterial pressure under normal and abnormal conditions and to develop the bearing which these facts have upon the problems which are daily presented at the bed side and in the consulting room.

The writer does not claim originality for what follows. He has freely consulted the classical articles on the subject available, and only hopes that the results may be useful to some who like Hippocrates find that "Life is short, and the Art long; the occasion fleeting; experience fallacious, and judgment difficult."

At the very outset we are confronted with the ever troublesome question of definition. It is not an easy thing to put into words just what we mean when we use the terms "blood-pressure," or, more accurately, "arterial pressure", no matter how clearly we understand them ourselves.

Blood-pressure or arterial-pressure is the tension of the vessel wall produced by the systole of the heart transmitted by the blood stream, and the elastic response of the vessel wall to the force which stretches it.

Both the elasticity of the arterial walls and the force which tends to stretch them are dependent upon a

number of rather complex factors which work together to maintain the tension of the vessel wall within certain limits which we have come to consider as standard. When we discover an arterial pressure much above or below these standard limits we have to determine what factor is at fault before much can be accomplished in the way of correcting the trouble. The complexity of the problem is very apparent when we stop and consider the number of factors involved.

In the first place, the elasticity of the vessel wall is due first to the inherent elasticity given it by its histologic structure of elastic fibre and membrane. This, while differing in individuals, is more or less constant for the individual case. Under normal conditions this anatomic arrangement permits the vessel wall to resist a pressure many times (15 to 50) greater than any possible pressure ever put upon it by the blood stream. When this inherent elasticity is lost, as in arteriosclerosis, any condition which gives rise to an increase in general arterial pressure may determine the rupture of the friable vessel wall as is commonly seen in apoplexy.

If an artery be removed from the body—be cut off entirely from nerve supply and exposed to the air—it will after a brief period of dilatation contract and remain contracted for hours or days, until the death of the involuntary muscle cells in its coats. This is an inherent property of involuntary muscle tissue, and determines its being constantly in a state of semi-contraction and its response to the stimulus of stretching independent of vasomotor nerve control. In excessive haemorrhage the fall in arterial pres-

sure is not alone due to the reduction of the total amount of blood in the body, but also to the loss of stimulus to vaso-constriction supplied by the presence of a normal volume of blood in the arteries.

Of perhaps still greater importance in maintaining tone in the walls of the blood-vessels is the action of the vaso-motor centers through the vaso-motor nerves.

Stimulation of these centers will produce a general constrictoin of the blood-vessels in the body and a proportionate increase in arterial pressure. These centers are off-set by a vaso-motor inhibitory center, stimulation of which has an opposite effect and dilates the vessels. The two sets of centers working in harmony contribute their part in maintaining the mean pressure or physiologic norm.

In the supra-renal glands and certain other glands a substance is secreted which on account of its affinity for chromic acid, has been named "chrom-affin substance." This substance plays an important role in the maintenance of arterial pressure. It has been shown that this substance becomes exhausted in prolonged chloroform and ether narcosis and a decline in arterial pressure ensues. Low arterial pressure and loss of tone of the skeletal muscles are characteristic symptoms in Addison's disease, in which the supra-renal glands are primarily affected, and it has been further shown experimentally that ablation of the supra-renal glands in dogs is followed by a marked fall in arterial pressure. The effect of an administration of an extract of supra-renal gland in surgical shock is too well known to need comment.

When we turn from factors concerned with the elasticity of the vessel wall itself to those which make up the force which stretches it, we consider as being of prime importance the volume of blood pumped from the heart with each systole. This will depend upon the volume of blood flowing into the heart, the integrity and tone of the musculature of the left ventricle, the presence or absence of valvular defects, and the rate of the heart beat. How these different factors operate will be shown a little later when we consider the various forms of cardiac derangement in their relation to arterial pressure.

The column of blood upon leaving the heart meets with resistance which increases its stretching action upon the blood vessels. This resistance is highest in the arterioles and lowest in the capillaries, veinules and veins where the pressure becomes almost negative. The resistance will depend slightly upon the viscosity of the blood itself; but this factor is of comparatively slight importance. Hydrostatic pressure while a factor offering some resistance to the blood stream, is only of importance in certain pathologic conditions associated with impairment of vaso-motor control.

The actual total amount of fluid blood in the vessels is important in maintaining arterial pressure, and if this falls below a certain point the heart will be unable to "maintain its grip" upon the blood column and its action will cease. The total amount of blood in the body is usually calculated as being 7.7% or 1-13 of the total body weight. This is a more or less constant ratio, loss of fluid being made up by absorption from the tissues and any excess being

gotten rid of by exudation through the great serous cavities of the body. So active are these compensatory factors that up to 40% of the total amount of blood may be lost by haemorrhage and as much as $1\frac{1}{2}$ times the total amount be introduced by transfusion without producing any lasting fall or elevation of arterial pressure, providing neither the loss of blood nor the transfusion are accomplished too rapidly. Arterial haemorrhage will produce a fall in blood pressure when even a greater total amount lost by venous oozing produces no apparent effect, the loss being too rapid in the former instance to allow the compensatory factors time to operate.

Turning now to the clinical side of our subject we find that we have to deal with a maximum and minimum pressure in the arteries. The maximum pressure is the systolic pressure—the measure of the force necessary to obliterate the pulse wave during the systole of the heart. The minimum or diastolic pressure is taken to be the lowest limit of the maximum oscillation of the needle or mercury column in the sphygmomanometer. The average of these two pressures gives the mean pressure. The systolic pressure is usually meant when not otherwise specified.

The difference between the systolic and diastolic pressure is often of clinical importance, as in cases of aortic insufficiency where there may be as much as 100 m. m. Hg. difference between the maximum and minimum readings. The same may be true, though to a lesser degree, in cases presenting unusually high maximum readings. In normal pulses the diastolic pressure is from 25 to 40 m. m. Hg. below the systolic readings,

though the difference is very inconstant, for the diastolic pressures may fluctuate 100% under muscular exercise, while the systolic readings show a much less marked change.

The normal maximum pressures, while variously given and largely influenced by age, may be stated as follows:

Children under 10 years, 75 to 100 m. m. Hg.

Young adults to 40 years, 110 to 125 m. m. Hg.

From 40 to 50 years, 130 to 140 m. m. Hg.

From 50 to 60 years, 140 to 160 m. m. Hg.

60 to 70 years and over, 160 to 180 m. m. Hg.

Over 200 m. m. Hg. is considered a very high arterial pressure and under 70 m. m. Hg. a very low pressure.

In the aged the limit of cardiac response is reached in the neighborhood of 180 m. m. Hg. The heart can keep up the necessary pressure while the body is at rest but cannot supply the additional pressure which is called for by exertion—the reserve force of the heart being exhausted. Consequently we may see cases of "heart failure" in old persons without there being a fall in arterial pressure during the attack nor an increase should recovery follow.

As has already been mentioned muscular exertion has an influence upon arterial pressure particularly the the diastolic readings. It is impossible to make observations during excessive muscular exertion, but the mean is in all probability higher during exertion than when the body is at rest. It is a significant fact brought out by a series of observations made upon the athletes at the Universities of Oxford

and Cambridge that those who were trained to arduous physical exercises had a much lower arterial pressure than had those who were called upon to perform the same exercises without previous training. Furthermore it would seem that the lower ranges of pressure were compatible with the best of health—other conditions being equal—for observations made upon men habitually engaged in laborious occupations; but the observations made during periods of rest would seem to indicate that in them arterial pressures range below the average for their age rather than above.

Taking the pathological conditions in which there are departures from the normal in the arterial pressures, we naturally think first of certain circulatory conditions which are thus characterized.

Angina pectoris stands out among the circulatory diseases as being a disease par excellence of high arterial pressure.

The so-called vaso-motor form of angina pectoris is not uncommon, and we see an example of it in every case of "tobacco heart. While the arterial pressure is variable its range is distinctly high and the pulse habitually quick, this increased arterial pressure in smokers may produce the symptoms of angine pectoris in young people and anginal paroxysms in those who are older. Though it is claimed that no textural damage has been shown to have been caused by the vasomotor effect of nicotine, high blood pressure long continued will produce changes in the myocardium, hypertrophy and fibro-fatty degeneration, the changes differing only in degree depending upon the primary causes of the high pressure. Certainly the increased sensi-

tiveness of the vaso-motor system produced by such toxic substances as nicotine coupled with the habitually higher arterial pressures renders an individual liable to develop angina or acute cardiac embarrassment.

A condition similar to tobacco heart is sometimes met with in individuals of a somewhat neurotic temperament who have lived a life of worry and who have helplessly writhed under "the whips and scorns of time." Such unfortunates present an habitually high arterial pressure and are subject to "heart attacks" closely resembling those of true angina pectoris. In these the unfavorable mental condition has worked its full effect upon their blood pressure mechanism; for elevation of arterial pressure is usually an accompaniment of pain and nervous excitement, or concentration of mind. The hypnotic suggestion of work is said to have been sufficient in some instances to produce a marked elevation of the sphygmomanometric readings.

In the graver forms of true angina pectoris we see the same factors at work as in the vasomotor type—but greater in degree—the causes of increased arterial pressure. It would be interesting to know, if with the increased strain and complexity of modern life, these "diseases of hyperpiesis"—if we may so call them, are becoming of more frequent occurrence.

When called upon to differentiate primary cardiac angina pectoris from the vaso-motor type, a tense radial pulse during the attack and a high and variable arterial pressure between attacks would favor a diagnosis of the latter form. Sometimes, however, the doubt may arise due to some increase of arterial pressure caused by apprehension

and fear in a nervous patient suffering from an attack of true angina.

High arterial pressure is the rule in arteriosclerosis, though the presence of sclerotic changes in the vessel examined produces an increase of only 5-10 m.m. in the reading. Cases of arteriosclerosis complicated as they frequently are by chronic interstitial changes in the kidney give very high arterial pressure readings. It will be noted that the remote causes of arteriosclerosis are the same which determine a high arterial pressure.

Closely allied to arteriosclerosis is cerebral haemorrhage; indeed we may look upon apoplexy as a logical conclusion in the majority of cases of arteriosclerosis. In these cases observation of the arterial pressure is of great value, in diagnosing apoplexy from other conditions associated with coma, for in uraemia alone does the reading reach approximately the point seen in apoplexy, and most generally does not. If in a case of apoplexy there is a decline in arterial pressure, or the pressure remains unchanged without any increase in severity of other symptoms, it is safe to conclude that the haemorrhage has been arrested, whereas steady rise in arterial pressure would indicate continued extravasation of blood into the brain tissues. While the blood pressure in patients liable to cerebral haemorrhage is frequently very high, when haemorrhage does occur it may reach the extraordinary height of 300 m.m. Hg. In this connection it is not out of place to remark that in estimating extreme degrees of arterial pressure by means of the cuff as used in the Riva-Rocci instrument and its modifications, the pressure necessary to obliterate the radial pulse

may seriously bruise the soft parts over which it is applied.

In speaking of aneurysm Quinke states that the distending force in the formation of aneurysm is the blood pressure on the internal surface of the vessel, and, further, that increase in blood pressure is specially favorable to the occurrence of aneurysm. Prof. Osler quotes McRae as finding in dilatation aneurysm that in twenty out of twenty-six cases the arterial pressure was below 140 m. m. Hg. In two patients there was an average of 80 m. m. The highest pressure was 260 m. m. It is worth remembering, however, that in aneurysm while there may be but little or no increase in arterial pressure, there is often a great difference in the two brachials, so that a difference of 20 m. m. Hg. is strongly suggestive of aneurysm. (O. K. Williamson.)

Primary myocarditis is usually characterized by low pressure; but in that associated with disease of the kidney or arteriosclerosis, or both, the readings are usually relatively high.

The "water hammer" pulse of aortic regurgitation alone or when associated with some degree of stenosis, is really a pulse characterized by a high systolic and low diastolic pressure. This is also met with when aortic insufficiency is associated with certain mitral lesions, but aside from these conditions, chronic valvular disease of the heart gives rise to no constant variations in general arterial pressure. Neither can absence of compensation be determined by the sphygmomanometer as arterial pressure may remain high or even increase when compensation is failing.

Most forms of kidney disease show

an increase in arterial pressure. That this is not due to the frequently associated thickening of the arteries is shown by its constant occurrence in the early stages of acute nephritis, particularly that secondary to scarlet fever. It has been suggested, and with reason, that in such instances the increase in pressure is brought about by a heightened activity of the vaso-motor centers in response to the stimulation from some toxic substance circulating in the blood. Certain it is that the onset of uraemia is marked by an increase in arterial pressure and the fluctuations in pressure are often commensurate with the variations in degree of the uraemic symptoms. In granular kidney the blood pressure may reach 180 or 200 m. m. If, though in the later stages associated with a dilated heart the pressure may fall within the limits of health. In this form of kidney disease with high arterial pressure uraemia is liable to supervene. The headache from which these patients suffer would seem to be due to the effects of high arterial pressure rather than to the presence of a toxæmia—its severity being frequently determined by postural changes. However in a case under the writer's care there was a pressure of 194 and the patient never complained of headache throughout the course of his illness.

In chronic parenchymatous nephritis there may or may not be a rise in arterial pressure. Often no departure from the natural is noted.

Orthostatic albumenuria is a peculiar condition in which the albumen disappears from the urine when the patient assumes a recumbent position. This is commonly associated with a

low arterial pressure and by some is believed to be due to the latter condition.

Departure from the normal blood pressure readings are commonly observed in certain blood affections. In chlorosis there may be a rise, but this is not constant and when it does occur is thought by some competent observers to be due to some associated condition rather than a manifestation of the chlorosis itself. Sahli has recorded observations made in four cases of haemophilia which would indicate that this strange disease was characterized by low pressure. In a case of the writer's, subcutaneous haemorrhage about the large joints reappeared when a slight change in altitude was made, and while no instrumental observations were made, the pulse was always soft.

In the acute infectious diseases, there is usually a progressive fall in arterial pressure as the heart grows weaker and the tone of the vessel walls becomes impaired. In febrile diseases the time of the initial rigor, associated with a general constriction of the cutaneous vessels and increased rapidity of heart action, is marked by a rise in arterial pressure at the beginning, with a steady decline after the first day or so of illness and persisting throughout the course of the illness. This is well exemplified in pneumonia in which disease there is a gradual decline after the onset to the time of crisis when there is often a sudden critical drop. A rapid fall in arterial pressure in the course of pneumonia and before the crisis only too often indicates impending collapse.

In enteric fever we find about the same condition to obtain, there being a gradual decline in arterial pressure

from the first week to the end of the fourth, and then under fevorable conditions of convalescence a gradual return to the normal. A sudden rise in arterial pressure in the course of typhoid fever usually indicates the occurrence of perforation—an acute infective inflammation showing almost always a rise in arterial pressure. A very rapid fall in the latter weeks of enteric fever usually is of grave import indicating haemorrhage or collapse.

Shock and collapse show the most marked fall in arterial pressure. Indeed, nearly all the symptoms of this condition are due to lowered arterial pressure, the patient literally bleeding to death into his own vessels with the dilation of the veins of the splanchnic area.

In advanced pulmonary tuberculosis lowered arterial pressure accompanies the general asthenia. A noteworthy rise may be indicative of a developing meningitis making pressure on the brain. In the earlier stages of the disease the blood pressure shows no noteworthy departure from the normal limits. In pulmonary haemorrhage the psychic factor usually sends the arterial pressure to a pretty high point unless the haemorrhage is so massive that shock supervenes at once. Much has been said of late of the marked increase in arterial pressure observed in tubercular patients after removal to a higher altitude. Some care is necessary in interpreting these observations, for while altitude seems to have some influence in increasing arterial pressure, the strychnine which many of these cases receive, particularly those whose condition is markedly asthenic, should not be denied its share of credit

in the apparent improvement noted even in otherwise unfavorable cases.

Certain disorders referable to the nervous system such as hysteria, neuralgias and similar painful affections, melancholia and lead poisoning show a rise in arterial pressure—though diabetes usually shows no increase.

Pathologic conditions of the brain causing an increase in intracranial pressure bring about through the vaso-motor centers a stimulation of the splanchnic vaso-constrictors, so that notwithstanding actual depression of the vaso-motor centers of the brain through anaemia, the splanchnic centers more than compensate for the depression and determine the marked rise in general blood pressure, which is such a valuable diagnostic symptom in these conditions.

In asphyxia the slow full pulse denotes stimulation of the vaso-motor center, and a resulting high blood pressure, and the gravity of the case may be determined by the lengthening of the pulse wave and increase in arterial pressure. This marked increase in arterial pressure is but temporary and gives place to a decline at first slow and then more rapid denoting gradual exhaustion of the centers governing the constriction of the blood vessels of the intestine, spleen, kidney and uterus; (the vessels of the adrenals, skin, muscles and brain dilate from the first). Continued excessive demand upon the vaso-motor centers will sooner or later exhaust their powers to respond, and death in surgical conditions is as frequently, if not more frequently due to failure of the vaso-motor centers, as to failure of the heart *per se*.

In closing permit me to say, that however complex the factors with

which we have to deal; however beset with difficulties and obscurities the interpretation of arterial pressure reading may be; they are practical and important for every man who is called upon to make a diagnosis or treat an illness. But twenty-five years have passed since von Basch constructed his first instrument for determining arterial pressure on the intact human body,

and the knowledge gained in this quarter of a century through the use of improved instruments has been of incalculable benefit to mankind and has brought our art one step nearer exact science. With more accurate instruments and more general use of them, the advance along this line of investigation during the next twenty-five years should be, to say the very least, worthy of what has already been done.

The Common House Fly.

By T. C. Sexton, M. D., Las Cruces, N. M.

With the return of the months of summer, we have a return of our most universal pest. Under the scrutiny of the entomologist and the hygienist, this little insect has been brought into prominence, because of the fact that it is held directly responsible for most of our typhoid fever, infantile diarrhea, dysentery, and cholera. Once under suspicion, many observers and experimenters have directed their attention towards it, and suspicions were soon confirmed as facts. Its filthy place of hatching; early life; and food supply, are so loathsome, as to place it under the ban of those who know of them; and under condemnation of the scientist, as they have learned that they bring disease from the human excreta in which they reach adult life, and gain their food supply, and disseminate it, costing innumerable lives, and financial loss to the earner and the state.

The fly having hibernated either in its adult state in a hidden crevice of a protecting house; or at the surface of the ground beneath the manure, or within the manure itself, emerges with the warming weather. It is asserted that the hardier females that had not oviposited the previous year, are those that survived the winter, because it appears that they do not live very long after laying their eggs.

The temperature favoring, the female lays her egg in horse manure, or human excrement. It is variously es-

timated that from 90 to 95 per cent of all house flies are hatched in horse manure. Of course this is the preference for the oviposit, as observers have disclosed. If the horse manure is not at hand other excrement, fermenting fruits and vegetables will be used if more accessible to the fly. Ordinarily in the smaller towns and villages, the most common, or equally as common place of access as the horse manure, is the open unsanitary privy. Not necessarily is the privy the possible factor, but upon the open ground if human excrement is there deposited, will the fly lay her eggs, and hatching will follow in a few hours. However where there is a house or a home, as a rule one of these unsanitary necessities will be found, and if the trouble is gone to to make an examination, it will be found teeming with the white larval maggots of the common house fly. The fly is attracted there for its food, and because it is darker and quiet, she will instinctively deposit her eggs, which hatch in this medium which furnishes moisture, heat, and food for the growing larval and pupal stages.

The number of eggs deposited averages from 120 to 150. These are laid in clusters of irregular size and shape, either on their ends or sides. They are minute, being about 1-20 inch in length ovoid in shape, and glisteny white. Microscopically they appear polished, and covered with hexagonal markings, resembling pavement epithelium. Hav-

ing been laid, in about eight hours they hatch. The time varies however with the temperature, climate, and amount of moisture present. In Liver-pool it ranges from 8 hours to 3 or 4 days, the average being 12 hours. If laid in fermenting material the period of incubation is reduced to the minimum. At a temperature of 75 to 80 degrees F., hatching takes place from 8 to 12 hours. At 60 degrees F. in 12 hours, and at 45 degrees F. it is postponed until the third day.

At the end of the incubating period, there appears a split on the anterior end of the dorsal side in one of the oval ribs. This split continues posteriorly, and when this has extended far enough for a sufficient outlet, the larva crawls out. It is quite slender, glistening white, and tapers from its blunt hind end to the pointed head. It is extremely active, and burrows as soon as it is hatched. As it grows it casts its skin twice, and in doing so, passes through 3 distinct stages. In this growth there is likewise a change in color which reaches a yellowish at the end of the larval stage. In form the blunt end grows more truncate, while the pointed head remains about the same. As in the oval stage, the temperature has a material modifying influence upon its growth, influencing the time in passing through the successive stages, and the size of the insect.

The time lapsing from hatching to the first molt is 24 hours. Now its first skin is shed. From the first molt to the second one, when the second skin is shed, a period of 24 hours lapses, and from the second molt to the transformation to the pupal stage, 72 hours are required ordinarily. Temperature has a marked influence upon

these stages however, as larvae have been kept at 54 degrees F. and not matured at end of 8 weeks.

During the larval stage nutrition is at its height, and this is in preparation for the pupal stage when it does not feed. This is observable in the fact that the yellow color of the late larval stage is due to proliferated fat cells, upon which is drawn for nutrition during the resting and non-feeding pupal stage.

Pupation may take place anywhere. The rule is for the larva to descend deeper into the substance upon which it is living. Or if the soil is moist and easy to enter, it may burrow two or three inches therein.

The larval stage having been completed, the alimentary tract is emptied, and the larva contracts from its own skin. This skin at this stage is almost a cylindrical case, with only a slight difference between the two equally rounded anterior and posterior ends, with the posterior slightly larger. The early pale yellow pupal skin rapidly changes to a red, to a dark chestnut. The pupal shape is rapidly assumed, and in about 30 hours, most of the parts of the future fly can be recognized, even though ensheathed in a protecting membrane.

In this stage 5 days is the normal duration. If insufficient heat is present during this time, the time may be protracted from 14 to 28 days, or even more.

Having completed the pupal stage the pupa emerges by alternately inflating and deflating the frontal sac, in this way pushing off the anterior end of the dorsal and ventral portions, and levering itself from the split case. Having liberated itself it makes its way

to the exterior of the heap and crawls away, its wings in the meantime unfolding and assuming their normal texture. The chitinous skeleton becomes hardened, and these having been completed the insect has reached maturity.

Having grossly shown the different steps in the hatching, growth and development of the house fly to maturity, it might be well to consider several important factors associated with the fly, with the view to exterminating the insect, in mind. Howard has made calculations, through which he shows that beginning with one female fly April 15th, which deposits 120 eggs, which under favorable condition will increase by September 10th to the number of 5,598,720,000,000 adult flies. These figures are unbelievable, but should each egg hatch, reach maturity, and the fly survive the summer, we would without question believe and realize the truth of the figures. The fly however is not long lived, and it is asserted that the female does not live long after depositing her eggs. There are certain diseases, and insects which kill them out rapidly in the advanced summer months and then the war that is made upon them in almost all households decimates them. The female may deposit as many as four batches of eggs, however, and in that instance the figures given would necessarily be greatly increased, as these figures are based upon one deposit of 120 eggs. With this in mind, it stands to reason that the sooner in the season the fight is made upon the fly, the more is to be accomplished toward its eradication in the advancing season.

It is not to be expected that the danger in the 90 per cent of flies that are hatched in horse manure is so great,

as is the smaller percent that hatches, and feeds in human excrement. Of course the larger per cent may become infected by feeding upon exposed infectious feces, and carry the disease to others, and the greatest care should be used to screen all typhoid patients, and dejecta of all kinds, reducing the possibility of infection to a minimum.

Having placed the insect under the ban, What are the best methods that have evolved for its destruction? Their place of breeding must first be found. If it is the manure pile, this must receive attention. If the unsanitary privy, it must be cleaned up, and placed in as near sanitary condition as circumstances will permit, and if possible a sanitary privy must be substituted, as originated and used by Stiles. The description of this may be had by writing to the Department of the Treasury, Public Health and Marine Hospital Service, Buletin No. 37, with the request for forwarding. If it is the garbage can, or some other source containing filth, it must be rectified, and the sooner it is done the better. At the stable the manure should be cleaned up daily, and wherever possible placed in a screened enclosure, with fly traps at the windows. The floors of the stable should be swept clean, and preferably sprayed at daily intervals. As well the manure should be sprayed. Screening the stable itself is highly recommended where the finances permit, but comparatively few of the horse owners can screen their stables, and many horses have no stable in which to live. As they have an aversion to kerosene, carbolic acid, and pyroligneous acid, these can be used successfully to spray the manure piles, floors and sides of the stable, and in

this way will keep the fly away from a place upon which to deposit their eggs. Then if the eggs have hatched, these same agents have a fatal effect upon the larvae, pupae, and adult flies. The agents are not expensive, and can be used in an ordinary plant spray. A teaspoonful of carbolic acid to a quart of kerosene will be found very effective. The pyroligneous acid may be used very much stronger, and is less dangerous for fire. Chloride of lime is efficient, but as it requires a good deal of it, the cost is prohibitive to almost all.

If the closet is at fault, it should be screened thoroughly. Into the vault should be thrown disinfectants to prevent the females from depositing eggs, and to kill all the larvae and pupae, and whatever adult flies are present.

All garbage that is destructive by fire should be destroyed in that way. It should not be kept in the house if possible, and it should be protected by the spray, screen covering, and fly traps. In this way it will not be a source for breeding, and will prevent the insects from deriving any food from that source.

As the screen door and window screens are very attractive to the fly that is attempting to get into the house, and likewise an efficient obstruction, it becomes less attractive to them if sprayed or rubbed with the carbolic-kerosene mixture. When they get into the house in large numbers, it is better

to use a hot shovel and 20 drops of carbolic acid upon it, which fuming, kills all the flies in the room. Pyrethrum powder too is equally efficient, but only stupefies them, and it becomes necessary to sweep them up and burn them. Formalin in water is a safe and efficient poison for them, and likewise bichromate of potassium, a dram to two ounces of water. The swatter is one of the best simple inventions and contrivances for the fly imaginable. It is efficient, and is fragile enough not to mash them all over the object upon which it is seated. For those that are wild and inaccessible, sticky paper will soon capture them. There are many fly traps which are convenient and efficient, as well as many contrivances for inviting and poisoning them, on the market, and seldom does one go into a house no matter how humble, without seeing some form of destroyer for the fly.

There is no excuse for the fly, and there is rapidly growing an intolerance for it. In a very few years more, even the lower and poorer classes will acquire enough education and information upon it, to arise from their tolerance and wage a relentless war upon it, as are the better classes at this time. Their destruction can be accomplished with little expense, a bit more trouble, and considerable perseverance, and let us hope that in a very few years it will be carried to the point where they will be rarities, and all strive for that end.

BOOK REVIEW

We have received Bulletin Number Six of the Carnegie Foundation For The Advancement of Teaching, dealing with Medical Education in Europe.

We have not as yet had an opportunity to thoroughly digest the wealth of information that this work contains and therefore shall reserve our review for a future issue.

DISEASES OF THE GENITO-URINARY ORGANS AND THE KIDNEY.

Third Revised Edition.

Diseases of the Genito-Urinary Organs and the Kidney. By Robert H. Greene, M. D., Professor of Genito-Urinary Surgery at the Fordham University, New York; and Harlow Brooks, M. A., Assistant Professor of Clinical Medicine, University and Bellevue Medical College. Third Revised Edition. Octavo of 639 pages. 339 illustrations. Philadelphia and London W. B. Saunders Company, 1912. Cloth, \$5.00 net; Half Morocco, \$6.50 net. W. B. Saunders Co., Philadelphia and London.

This is the third edition of a well known work by two American authorities, one a surgeon and the other an internist.

Previous editions of this well-known work have established for it a place in the profession and the third edition adds to the value of the work in that it is brought up-to-date and is entirely reliable in so far as recent advances along the lines of the work are concerned.

The book is well worth the careful reading of the general practitioner as well as the specialist and well worthy of the consideration of the profession generally. While it does not speak the last word on the subject it brings to the use of the general practitioner the latest advances along the line of which it treats and these only after a master hand has eliminated the unfit.

B. G.

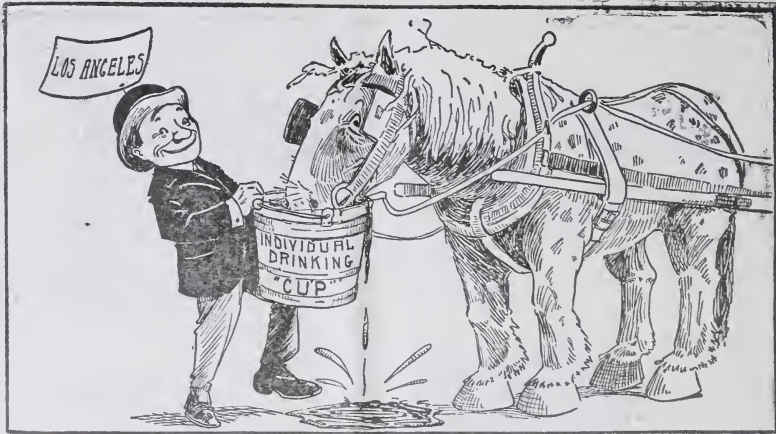
LABORATORY METHODS

With special reference to the needs of the general practitioner, by B. G. R. Williams, M. D., member Illinois State Medical Society. American Medical Association. Assisted by E. G. C. Williams, M. D., formerly Pathologist of Northwestern Michigan Hospital for the Insane, Traverse City, Michigan, with an introduction by Victor C. Vaughan, M. D., LL.D., Professor of Hygiene and Physiological Chemistry and Dean of the Department of Medicine and Surgery, University of Michigan, Ann Arbor, Michigan. Illustrated with forty-three engravings. \$2.00 net. St. Louis Mo., Mosby and Company.

A most excellent guide for the general practitioner in laboratory methods. The work does not profess to handle the subject as would be handled in a larger work, nor is it a compend. It is rather a practical laboratory working guide, a book to be placed upon the laboratory table for frequent consultation. As such we most heartily recommend it.



SEVERAL REASONS WHY FLIES SHOULD BE.
UNWELCOME GUESTS.



Individual drinking "cups" for horses will be a reality here if a recommendation made at the Los Angeles meeting of veterinary surgeons is carried out. Watering troughs are breeding places for glanders germs, say the veterinarians. The report urges each driver to provide himself with a bucket, from which his horses, and no others, may drink.

The New Mexico Medical Journal

Volume VIII

AUGUST, 1912

No. 5

E · D · I · T · O · R · I · A · L

The New Mexico Medical Journal is not responsible for the opinions expressed by any of its contributors.

THE FATE OF "OUR MEDICAL BILL," AND WHY?

Should you have a difficult piece of work on hand and employ one to do this work and at the same time not provide him with the most essential implement with which to perform the work, would you reasonably expect it to be done? You may say that the workman should furnish his own implements. That depends. You engage him and do not so much as feed him while he is trying to accomplish the task to say nothing whatever about remunerating him for his time; then would you expect him to wear out his valuable implements working for nothing and boarding himself? Such a proposition is simply unreasonable. Yet, this is precisely the condition in which the Legislative Committee of the New Mexico Medical Society found itself when the society put it to work trying to get reasonable medical legislation. We were not provided with the most essential implement with which to labor. After several months of arduous labor, the committee completed and agreed upon a medical bill and presented it to the legislature. Had this bill been enacted into a law just as it reads our state would now be in the front rank with progressive states

in the matter of medical laws. It was a good bill, with no flaw to be found except by those who do not care one copper about the health and welfare of the people. Then why was it defeated before the legislature? Simply and solely because not one member of the committee was there to go before the committees of the legislature and work for it. Why were they not there? They were not furnished with the essential implement with which to perform this part of the labor. The New Mexico Medical Society failed to provide the necessary means to defray such expenses. The committee appealed to the profession of the state for aid and were met with such replies as "I do not believe in lobbying." "I am heartily in favor of the bill but will not give one cent to support a lobby." "I expect to spend several days in Santa Fe during the session of the legislature at my own expense but will not give a cent to keep a lobby there." These and many more were the character of replies we had to our appeal. I have not the least doubt that had some member of the committee, who was thoroughly familiar with the wording and meaning of the bill, been in Santa Fe to fight for our bill, it, to-day would be the law of New Mexico with-

out a single change. With something like 400 regular physicians in New Mexico the committee thought it not unreasonable that each should share a part in the expense of keeping some one in Santa Fe to work for the bill; that if this member willingly gave his time from his business he would be doing his full duty, and more. Some one may say "The love of the profession should have prompted the committee to 'dig up' the expense money." I would ask this one, did you love the profession ten dollars worth when the committee appealed to you for aid? The committee does love the profession but we love our wives and little ones more. I do not censure Governor McDonald for vetoing the bill that did pass the legislature, in fact I think he did exactly right, though I may have other reasons for objecting to it than those attributed to the governor. It is my opinion that the only way to ever get adequate medical legislation is for the profession to unite on the exact wording of a bill that will defend the people from incompetency and then select some *one member* to go to the capitol and defend it, appropriating the necessary amount of money to defray his expenses while there. In our failure I have no complaint to lay at the door of any one man. I presume all acted in a manner that seemed right to them and that their acts were prompted by pure motives, looking to the best interest of the laity.

No state has ever accomplished the desired end in medical legislation where the medical profession refused to go down into its pockets. Of course this is all wrong and should not be the case, nevertheless it is a fact. The laity, it seems, cannot see that the move

for better laws regulating the practice of medicine is not a mercenary move on the part of the profession, and even some of our legislators go to the extreme of denouncing any move looking to the improvement of such laws as an effort to establish a "medical trust." Such men may be, and possibly are honest in this conviction, still, they should be and can be educated out of it and made to see that the regular profession of medicine is able to take care of itself at any and all times and under any circumstances, and that so far as it, individually, is concerned, we do not "care a whoop" whether there is any medical law at all or not. It is only the interest we feel in the health and happiness of the masses that interests us. These matters should be thought over seriously if we ever expect to make New Mexico anything more than a dumping ground for the offal of more enlightened states.

Yater.

THE ROSWELL MEETING.

We again call the attention of the members of the New Mexico Medical Society to the coming meeting of the Society at Roswell. The dates, as has already been announced, are September 12th, 13th and 14th. On another page will be found a tentative program for the meeting.

It is particularly desired that those who contemplate attending this meeting should take note of the fact that the local Roswell committee has arranged for a 1 1-5 fare for the round trip. This is, of necessity, on the certificate plan, and all who attend and desire to take advantage of the reduced rate **MUST** take a receipt for the full fare from the agent from whom they

purchased their ticket prior to boarding the train for Roswell. The reduced rate will not be operative unless there are 50 or more paid in advance tickets purchased. In this connection it is desired to call attention to the fact that the New Mexico Dental Association will hold its meeting in Roswell at the same time as will the New Mexico Medical Society, and the combined attendance should more than reach the required number of 50.

From appearance it now seems that we shall have a particularly good program for the coming meeting and that the attendance will be above the average, but appearances are deceitful sometimes, and, therefore, we urge the attendance and active participation in this meeting of as many of the members of the New Mexico Medical Society as possible. Remember, however, a 1-5 fare on the certificate plan has been arranged for, and, in order to make this rate available, there must be at least 50 full paid fares in attendance and EACH TICKET PURCHASER MUST SHOW HIS RECEIPT BEFORE THE REDUCED RATE WILL BE GRANTED.

THAT VETO.

Our impression when we first heard that Governor McDonald had vetoed the medical bill was that he hit below the belt, but after we had recovered from the shock and had deliberated some, it did not look so badly, and now after weeks of deliberation we are quite sure that the governor is not so dense or belligerent as we had thought. Many moons and much knowledge, both legal and medical, had been spent in framing the bill and we really thought it the best ever, but—Let's analyze the veto.

Since we come to think of it from a real humanitarian standpoint if some woman in labor needs help and on account of distance cannot get a doctor then perhaps the next evil would be the "Granny" and while we pity the poor woman we admit that many times, we deprive her of said "Granny," it might work a hardship on the proud Pater-to-be so let's let it go at that. As the lawyer would say "We admit the point is well taken," at the same time we pray for the poor mother. Any one who practices mid-wifery for pay should be compelled to qualify, as we know that no attendant is preferable by far than the ordinary "Granny."

Now about the Christian Science clause of the veto. This is a many sided question and one that only time may settle. The medical world and the laity may never agree upon many very essential points. It seems we can't look at matters from the same angle and while we know that the really sick and afflicted would be fortunate, if deprived of this cult, we are convinced that better legislation against the evil would be had along other lines than "Our Bill." That Christian Science needs regulation will not be denied by any sober, intelligent mind. That it is dangerous we as a profession agree, but what to do with the thing is a problem. If a sane adult elects to place his health and life in the hands of this tribe we can't see where we have any say in the matter and as the bill would put them out of business entirely this clause of the veto is well taken.

What seems to us the better solution is the enactment of statutes protecting from Christian Science the health and lives of those who do not subscribe to

the teachings of the late lamented, and that of innocents yet under control of the misguided. As Christian Scientists do not recognize disease, it is important, nay imperative, that the laws take cognizance of infectious and contagious diseases and step in and demand that Christian Science shall not aid nor permit the spread of infection or contagion. And this law should have steel bars as a deterrent. Then innocent children should be protected. Christian Science should not be allowed to jeopardize the health and lives of children. And this law should have teeth of steel. In our future bill we may agree to eliminate these objectionable features but it is no less our duty to urge legislation along all lines for the conservation of life and health, especially those above-mentioned. We hope that our governor will as a salve to our wounded feelings ask at the hands of our legislature some remedy for the two reasons for the veto.

Apropos of the failure of the medical bill passed by the first state legislature by reason of the veto of the Governor, the case cited in the text below is interesting. This case comes under the medical law of the state of Texas, after which the law passed by the New Mexico legislature was patterned. As we have not access to the Southwestern Reports, we print the article as it appeared in a recent issue of the New York Medical Journal.

MEDICAL LAW—THE RIGHT TO PRACTICE MEDICINE AND SURGERY.

An interesting case of prosecution for unlawfully practicing medicine and surgery is reported in 146 Southwest-

ern Rep., page 891; the case is entitled Singh v. State and is from the Court of Criminal Appeals, of the State of Texas.

In this case one Bishen Singh, a Hindu, who did not pretend to be a qualified physician and surgeon, had located at Dallas, Texas. He announced his availability to the public by means of certain literature. He had a card printed, on one side of which was a picture of a man with certain hieroglyphics below, followed by the words "Bishen Singh, Hindu, Punjab, East India." On the reverse side of the card was a picture of a building with the following words: "You are invited to call at the Hindu Temple of Science and Health. The only one of this kind in America. Yogi Philosophy, Psychic Healing—Health—Success--Happiness. Consultation Free. 'Phone M. 6583, 226 Ross Ave., Dallas, Tex." A circular which he caused to be issued had also a picture of a house, followed by the words "Hindu Temple of Science and Health. The only one of its kind in America. Yogi Philosophy. Psychic Healing. The Ancient Methods of the Old Masters and Adepts Used in the Treatment of Diseases of the Body and Mind. When all other means have failed to restore you to health and happiness go to the Hindu Temple, 226 Ross Ave., Telephone Main 6583, Dallas, Texas. Consultation Free." The defendant also used a letterhead, in substance the same as the circular.

Upon the trial of the case, a witness by the name of Ball testified that he took his wife to Dallas to be treated for a tumor and cancer of the stomach, and that he was induced to go to the defendant, who told him that he could

cure her, and that the witness agreed to pay \$30 to the defendant to treat his wife. The witness in describing the treatment said that the defendant would rub the palms of his hands together, that he would lay his hands on the tumor and draw them across the tumor; this he repeated a number of times; he would throw his hands as if casting it behind him, telling the patient that the tumor would go away. He was about thirty minutes giving this treatment. He also gave absent treatment, with regard to which he instructed the patient at a given hour "to look at a picture he had, and to lie straight out and put her mind on that, and not let any noise or person bother her at all." The witness paid the defendant \$30 and asked him for a receipt; he answered that he never gave receipts, saying that he could not collect debts by law. The witness also paid \$10 by check, on the face of which he wrote "one week's medical treatment for wife," which was introduced in evidence. The check had been indorsed by defendant and cashed. The witness also testified that defendant prescribed for him a box "Akhaca" and two pipes and told him to smoke the preparation for his catarrh. He paid the defendant one dollar for the preparation. The preparation was in a box; on the back were printed words recommending it for the cure of catarrh, asthma, etc. It had on it the name "Singh Remedy Co."

Another witness also testified that he called upon the defendant at the "temple" and asked him if he could cure his wife of neuralgia and the defendant replied that he could, and that the charges would be \$10 a week if the witness brought his wife to the temple

and \$15 if the defendant preferred to go to the home of the witness.

The principal question presented to the court on this appeal was whether or not the defendant was engaged in the practice of medicine. Upon the trial of the case defendant contended and introduced witnesses to prove that the only treatment he gave was by prayer, that he did not claim to effect these cures himself, saying his power was from God, that God effected the cure. Pursuant to this theory of the defense the Court was requested by the defendant's counsel to charge the jury that if they believed from the evidence he used prayer only in treatment, and held himself out as treating diseases through the will of God only, that this was not the practising of medicine as defined by the statute governing the practising of medicine, and that if they so believed they should find the defendant not guilty. The trial court refused to give this instruction to the jury. Upon the appeal this refusal was urged as ground for reversing the judgment of conviction.

Mr. Justice Harper, in considering the force of this argument, referred to the fact that the medical act of the State of Texas was a reasonable exercise of the police power of the State, for in the act it was provided that nothing therein should be construed so as to discriminate against any particular school or system of medical practice. Continuing the Justice said:

"However it does provide that no one shall treat or offer to treat any disease, mental or physical, or any physical deformity or injury, by any system or method and charge therefor, unless such person has obtained a license from the board of examiners

appointed by the Governor, and said board is required to examine applicants as to their knowledge of anatomy, physiology, chemistry, histology, pathology, bacteriology, physical diagnosis, surgery, obstetrics, gynecology, and hygiene. If a person is of good moral character and passes an examination in the subjects named he may practise whatever method he deems best for effecting the cure of disease. The subject of the public health being a matter subject to the police power of the State, the legislature has the power to pass laws requiring a certain amount of knowledge on given subjects, which it in its wisdom deems essential to the proper diagnosis and treatment of disease. In the law there is no discrimination as to persons or methods, but all are required to undergo the same examination, and then each and every person licensed may treat disease in the way by him deemed best. The legislature has not sought to say how disease shall be treated by any one, but has simply required that all persons who shall treat or offer to treat disease shall have a knowledge of given subjects; the legislature deeming this essential to the preservation of the health of the citizens of the State. It is not for the courts to say that this is wise or unwise; that the requirements are too onerous or are insufficient to accomplish the purposes intended. This is a matter confided to the wisdom of the legislative branch of the government, and in the law it is provided that the examination shall be fair and impartial to all individuals. There is no discrimination against any person or class of persons, but the legislature deeming it essential that all persons who shall treat or seek to

treat disease in this State for compensation shall possess knowledge of certain given subjects it has so declared. The law is not violative of any provision of the Constitution and is but an exercise of the police power on a subject that all the law writers of note declare is within that power.

The Justice then shows that the legislature has defined the words "practice of medicine" to embrace all "who shall publicly profess to be a physician or surgeon and shall treat or offer to treat diseases, etc., for compensation." The Justice then adds:

We hold that in so defining the words the legislature has rendered liable to the provisions of the act all persons who shall treat diseases and charge therefor, regardless of the mode or method used in so doing, and the evidence both for the State and defendant, showing that appellant was treating and offering to treat diseases and disorders, and the evidence for the State being sufficient to show that he was making charges therefor, the judgment is affirmed."

We welcome to the fold of State Journals, the Arizona State Medical Journal which has just appeared.

The Journal is under the editorial management of Doctor Watkins of Phoenix—the new secretary of the Arizona State Medical Society, and will appear quarterly.

We are glad to welcome the Union County Medical Society to the ranks of component societies of the New Mexico State Medical Society. This society has twelve charter members and starts out enthusiastically. The officers are: President, Dr. N. E. Charlton;

Vice President, Dr. J. C. Slack, both of Clayton; Treasurer, Dr. V. C. Downs, of Greenville; and Secretary, Dr. J. M. Winchester, Clayton.

CONTROL OF DISEASE IN THE TROPICS.

Whatever influence the demonstration of the value of modern scientific medicine in the control of disease in the Panama Canal may have in this country, it is certainly having a good effect in tropical countries where the tendencies and ravages of tropical diseases are known. President Luco of Chile, in a recent interview in a New York paper, after describing in glowing terms the effect of the opening of the Panama Canal on commercial and financial conditions in South America, said: "The spread of plague and preventable diseases has been one of the worst handicaps of tropical America. With sanitation such as that of Panama, there is no reason why South America should not maintain a vast population and support nations as advanced as any in the world. The Panama Canal opens the gateway to the western coast of the continent and the elimination of disease from the Isthmus renders an even greater service to all Central and South America."

We have decided that we would request Washington to lend us several sanitary experts from Panama, the men whose services have won for your country such undying fame at least in South America. I personally would like to have the services of one of Dr. Gorgas' experts." Colonel Gorgas prophesied some time ago that the control of tropical diseases, making tropical countries a safe place of residence for white men, opened up an

almost inconceivable field for the civilization of the future. Civilized man now has the knowledge necessary to make him free from many contagious diseases. Those diseases about which exact knowledge is lacking are rapidly being investigated. When the history of the present era is written, the most important facts to be recorded will not be those connected with politics or international relations. The historian of the future will regard as the most important event of the present period the acquisition, beginning about 1870, by civilized man of the knowledge and control of preventable diseases. The extermination of plagues and epidemics will naturally be pressed most vigorously in tropical countries where the danger has been the greatest. The *Journal of the American Medical Association* says that it behooves us in temperate zones and civilized communities to bestir ourselves, lest those nations which we regard as backward outstrip us in the race for better health. That nation which first learns to utilize all the knowledge of modern science for the prevention of disease will rapidly improve, physically, commercially and financially, and will take a long step toward the front rank among nations.

INDUSTRIAL HYGIENE AND THE INTERNATIONAL CONGRESS.

The problem of the prevention of injury and disease among industrial workers is receiving more and more attention. The International Congress on Hygiene and Demography, to meet in Washington in September, will devote considerable time to the discussion of industrial and occupational

hygiene. Among the subjects on which papers are to be read are the physiology and pathology of fatigue; the injurious effects of unnecessary noise on workers; caisson disease; accident and diseases occurring in electric generating works; occupational anthrax; safety devices for the prevention of accidents; the effects of temperature and humidity on fatigue; dust and its effects. Other important topics to be discussed by eminent men are sex and age problems in industrial hygiene; the employment of women and its relation to infant mortality; child labor, etc. These topics will be further illustrated in the exhibit to be held in connection with the congress. The *Journal of the American Medical Association* expresses the hope that the attention given these questions by this important congress will no doubt give impetus to their further effective consideration by government authorities and will result in distinct improvement in these economic conditions.

PLAIN SPEAKING ON

SANITARY MATTERS

As the education of the public progresses in sanitary matters, the tendency to criticise officials responsible for conditions that are not as they should be becomes more pronounced. This is a hopeful sign, and means, inevitably, improved conditions. As examples of plain speaking on these matters, two instances may be cited. The headline over an article in a daily paper published in a large western city reads: "One More Baby's Life For-

feited to the Game of Politics." The article contains an account of an epidemic of scarlet fever which was traced to a certain dairy. It specifically attributes the death of a 5-year-old child to the milk from this dairy, and goes on to say: "The milk inspection department, during the time that a milker at the farm was developing scarlet fever, was playing politics. The inspectors were out soliciting votes among such of the dairymen as lived within the city limits, and had a vote May 21. On their shoulders is laid the blame for the infection spread through the city." The other instance also concerns the milk supply, this time in a large eastern city. The chief inspector of creameries of the state board of health made an inspection of creameries and found only three out of the twenty-seven that were up to the standard. He stated to the local board of health that he had no doubt that the impure milk was the cause of the death of many infants, and that if the board did not take immediate action the state board would step in and force the local board to do its duty. With all the agitation and legislation concerning milk it is scarcely possible that milk producers and distributors do not know the role of impure milk in the production of disease and death in infants. A conscience so defective as to permit such conditions to exist in the face of that knowledge, says the *Journal of the American Medical Association*, requires drastic criticism and vigorous action to penetrate it and get it in a normal working condition. Fearless speaking by newspapers and the public will surely improve the health situation.

THE MENACE OF

WOOD ALCOHOL

The wide-spread discussion which followed the series of deaths in Berlin as a consequence of the drinking of liquors contaminated with wood alcohol has again attracted attention to its poisonous character. There has been considerable difference of opinion as to whether the poisonous effect of this substance is actually due to the alcohol itself or to some impurities, which are almost invariably present in all except the most refined products. There is a scarcity of facts regarding the actual behavior of wood alcohol in the animal body, so that the underlying causes of its extremely poisonous character are by no means clearly understood.

With respect to ordinary grain alcohol, the component of our alcoholic beverages, the facts are better understood. Ordinary alcohol is, when taken in moderate quantities, rapidly burned up in the body. This act has been demonstrated by numerous experiments. With wood alcohol, however, the case seems to be different, accord-

ing to the recent investigations in the Institute for the Fermentation Industries at Berlin. It has been shown that when wood alcohol is administered to animals it may not be eliminated completely even at the end of two days. The repeated ingestion of considerable doses of wood alcohol may lead to a dangerous accumulation thereof in the body. This factor has heretofore not been duly appreciated. These subtle dangers associated with the use of wood alcohol deserve wide spread notice because of the increasing danger of its unsuspected entrance as an adulterant of the cheaper grades of distilled liquors and certain medicinal products. The insatiable demand for cheap liquors among certain of the degraded classes, says the *Journal of the American Medical Association*, and the difficulty with which the admixture of the inexpensive wood alcohol is detected, provide a constant temptation to the unscrupulous dealer and a menace to the health of certain classes. However objectionable adulteration may be on general principles, it becomes far worse when some subtle danger is harbored therein.



Revised General Program for Meeting of the New Mexico Medical Society to be Held in Roswell, on Sept. 12, 13, and 14.

Thursday, September 12th, Opening Exercises.

8 A. M. Registration at Secretary's desk.

10 A. M. Session called to order by President, Dr. R. L. Bradley

Invocation, Eld. M. C. Hughes.

Welcome address, behalf of city, Mayor W. M. Atkinson.

Welcome address, behalf Chaves county Medical Society, Dr. J. W. Kinsinger.

Response to welcome addresses, Dr. F. F. Doepp, Carlsbad.

Adjourn for dinner.

1:30 to 6 P. M. Scientific work.

8 P. M. Public Meeting, address by Dr. C. E. Cantrelle, Greenville, Texas.

Friday 13th.

8 A. M. to 12 M. Scientific work.
1:30 to 6 P. M. Scientific work

8 P. M. Annual Banquet at Gilkeson Hotel. \$2.00 per plate.

Saturday, 14th.

8 A. M. to 12 M. Scientific work.

1:30 to 6 P. M. Scientific work.

8 P. M., President's Address.

Memorial address by C. E. Lukens of Albuquerque.

Head-quarters, Gilkeson Hotel.

SOME OF THE PAPERS PROM-
ISED.

The Practice of Medicine, Past, Present and Future, Chairman's address, section on Medicine, S. D. Swope, Deming.

Chairman's address, section on Surgery, title to be supplied, P. G. Cornish, Albuquerque.

Advantages of Combined Abdominal and Trans-pleural Operation for Liver Abscess, with lantern slide illustrations, W. L. Brown, El Paso, Texas.

Pellagra in the Pecos Valley, Chas. F. Beeson, Roswell.

The Tonsil, T. W. Crowder, El Paso, Texas.

The Pathology and Medicinal Treatment of Acute and Chronic Gonorrhoea, J. Howard Haney, Jr., Clovis.

Observation on Oesophageal Diseases, E. C. Prentiss, El Paso, Texas.

Social Aspects of Tuberculosis, L. S. Peters, Silver City, N. M.

Gonorrhoeal Urethritis and Complications of Gonorrhoea, J. J. Walker, Dexter, N. M.

The Use of Tuberculin by the General Practitioner, A. G. Shorrie, Albuquerque.

Paper, title to be announced, M. K. Wylder, Albuquerque.

Salpingitis—Dr. W. T. Joyner, Roswell.

Malnutrition of Breast-Fed Babies—Dr. M. G. Cartwright, Albuquerque.

Chairman's Address, Section on Specialties, Dr. D. D. Swearingen, Clovis, N. M.

WHERE TO STOP.

Gilkeson Hotel, American plan,

rates with bath \$3.50, without bath \$2.50 to \$3.00.

Grand Central Hotel, American plan, rates with bath \$2.50, without bath \$2.00.

El Capitan Hotel, American plan, rates \$1.25 room and board, no baths. Rooms 50c, meals 25c.

Roswell Hotel, American plan, rates \$1.00, no baths. Rooms 50c, meals 25c.

Virginia Inn, American plan, rates \$1.25, no baths. Room 50c meals 25c.

Eastern Dining Hall, (Chinese), American and European plans. Regular meals 35c.

Next Meeting

New Mexico

Medical Society

Roswell, September 12th, 13th,
and 14th, 1912

Roswell----The Metropolis of Eastern New Mexico.

H. A. INGALLS, M. D., ROSWELL, N. M.

Roswell, the most progressive town in the finest irrigated section of the United States, the Pecos Valley, was founded in October, 1887, by the late Captain Joseph C. Lee, a sturdy pioneer of indomitable will, who, by sheer strength of character founded a town on a solid business foundation in the face of conditions, which, to the average individual, seemed almost to invite defeat.

His keen foresight is testified to by the beautiful Roswell of to-day, with its enormous shade trees, miles of cement walks, attractive and comfortable homes, blue grass lawns, numerous sanitary school buildings, churches, lodge homes, clubs and up-to-date business buildings.

From the first, Roswell and the fertile Pecos Valley, with soil of the same character as that of the rich valley of the Nile, has had more than a normal increase in population, improvement and production.

The Roswell district of Chaves County has 30,000 acres of alfalfa producing more than 150,000 tons of this product annually, which finds a ready market at prices ranging from \$9.00 to \$22.00 per ton.

While alfalfa may be regarded as the staple crop of this section, the apple industry must not be overlooked. More than 25,000 acres are in bearing,



ROSWELL HOMES.

with a production for the season of 1911 that approached the million dollar mark in valuation, and young



A PECOS VALLEY ARTESIAN WELL.

orchards are being added to this acreage each year.

Water is being developed on the land formerly used for the stock industry, in close proximity to Roswell, and this land is selling rapidly to farmers, fruit growers and for suburban homes.

This district is well supplied with water for domestic use and for irrigation. The North, Middle and South Berrendo, North Spring, Hondo and

South Spring Rivers furnish ditch-rights, while the lands not supplied by these streams are cared for by the enormous flow. Some of these wells in the artesian belt supply as much as three thousand gallons of water per minute, the average being about fifteen hundred gallons.

The progressive spirit of the citizenship is testified to by the modern buildings, both public and private. A new Court House has just been com-



NEW MEXICO MILITARY INSTITUTE

pleted at a cost of \$150,000.00; the Allison building and the new First National Bank building are two of the finest commercial structures in the State. The Federal building, now nearing completion at a cost of \$100,000.00, is another handsome structure.

Nearly all the religious denominations are represented and the majority have modern houses of worship, of artistic merit, and are a credit from every possible view point.

The Masonic fraternity has a \$50,000.00 lodge building, the most beautiful structure in the entire Southwest that is used exclusively for Masonic work.

The Elks have a home, centrally located, well designed and constructed, that is adapted to all the needs of the local, as well as the visiting members, of the fraternity.

In the matter of education Roswell is second to none. The Public School system is housed in four buildings, the last erected being the High School building, a pressed buff brick structure, containing space and equipment for the most approved methods of higher teaching.

The graduates of the Roswell school are recognized for entrance into the standard universities of the country and in some instances, on examination, have enrolled in the Sophomore classes.

Last, but not least, is that great school for boys, of which every good citizen of the Sunshine State should be justly proud, the New Mexico Military Institute. Founded as a Territorial institution in 1898 through the efforts of the late Captain Lea, ably assisted by the more prominent citizen-

ship of the day, the Institute has advanced from a school of one small building and a few cadets to one consisting of ten modern structures and an enrollment of 170 cadets.

That the management was placed in good hands and a competent and ample faculty provided for giving the cadets a thorough training is testified to by the record of its graduates and the fact that for

I. has been rated "Distinguished Institution" by the War Department. When one stops to consider that this distinction is given to but ten schools out of 95 or 100 inspected by General Staff Officers of the Army each year and that the other schools are from ten to seventy years older than the N. M. M. I. we must marvel at the progress made by the "West Point of the West."

The Institute is located on an eminence one mile north of the business center of Roswell, on a level tract con-

sisting of forty acres donated for this use by the J. J. Hagerman, and in recognition of his aid the new barracks, built on the Tudor Gothic style, is called "Hagerman" barracks.

Roswell, with an elevation of 3700 feet, is an ideal location when the physical well being of the individual is considered. The air is pure and dry; the more than 300 days of sunshine insure a minimum of decaying organic matter; this, with the perfect sewerage system, renders the spread of the acute infections almost impossible. Typhoid fever and other diseases are brought here for treatment, yet an epidemic has never been manifest.

Much credit is due the members of the Chaves County Society who have filled the positions of City and County Health Officers for the sanitary condition, which has resulted in our freedom from infectious diseases and a decided lowering of the mortality rate.

Some Blood Pressure Observations.

By Chas. Beeson, Roswell, N. M.

If one places a stethoscope over the brachial artery about an inch below the cuff of a blood pressure instrument and then runs the indicator up rapidly until the pulse at the wrist disappears and lets it fall slowly he will hear a sound at each impulse of the heart which exhibits a series of changes or modifications as the indicator falls which are fairly constant in normal individuals and which if rightly interpreted are of value as diagnostic assistance in some obscure conditions especially of the heart itself.

The first sound we hear is the sudden stretching of the blood vessel walls as the blood forces its way beneath the cuff and the point on the dial at this time would certainly indicate the true systolic pressure. The sound continues for a few m. m. as the indicator drops and is known as the 1st, Phase. It then takes on a murmur or rather changes to a murmur which continues for a few m. m. and gradually changes to a clear tone, this murmur is called the 2d, Phase.

This clear tone continues and sometimes increases in its intensity until all of a sudden it becomes dull; this clear tone is called the 3d. Phase. The end of this Phase in my observations correspond very closely to the lowest point of the greatest oscillations of the indicator which is said to mark the diastolic pressure. This point also marks the beginning of the 4th, Phase, the dull sound. This continues for a

time and gradually fades away leaving a dead silence which is called the 5th, Phase; At the beginning of which or at the point where the last sound is heard some clinicians believe this to indicate the true diastolic pressure. Any radical changes in these Phases is looked upon as of clinical importance.

As the third Phase seems to depend upon a moderate pulse wave rapidly transmitted, and this of course depends upon a strong systole, it follows that any change in its strength or duration would be of importance. It certainly requires a powerful heart to produce the so-called "pistol shot" and I have found in cardiac hypertrophy accompanying both interstitial nephritis and aortic insufficiency that a strong 4th, Phase may be continued after all pressure has been removed and in one case of aortic insufficiency it could be heard in the femorals and branchials at all times showing no doubt a powerful systole.

It is a poor rule that wont work both ways, therefore the absence of the 3d, Phase would mean a weak heart and the simultaneous absence of the 2d, 3d, and 4th, Phases means an extremely weak heart. It is said that marked anemia intensifies and prolongs the 2d, Phase on account of the increased fluidity of the blood. When making a second reading immediately following the first the air pressure should be exhausted before proceeding because the congestion of the arm pre-

viously produced interferes with the production of the sounds; So too should the reading be made as the indicator descends for the obvious reason that the Phases are not produced the same when the artery is closing.

On June 22d, 1912, L. S. age 20 years, came to me all out of breath having climbed one flight of stairs. His chief complaint was cough and shortness of breath; Said he had suffered most of his life with these symptoms. Had a bad spell with his heart at the age of six years, has had tonsillitis and rheumatism a number of times. Three years ago his last attack of these affections accompanied by a severe spell with his heart took place.

PRESENT CONDITION—Somewhat pale and lips bluish, carotids and other superficial vessels throbbing visibly, in fact the whole chest shakes with each impulse of the heart, a capillary pulse in the finger nails can be plainly seen. The chest wall seems prominent anteriorly especially the left side. The heart's apex impulse can be plainly seen in the 6th, interspace 3 1-2 inches below and 1 inch to left of left nipple. a thrill can be felt at this point so it can also over the subclavian vessels. Pulse is a collapsing one, a distinct waterhammer, rate 108. No oedema could be found. Percussion shows a immense area of dulness, quadrilateral in shape and extending, roughly speaking, from naval to nipples. Showing that both heart and liver were greatly enlarged.

Auscultation shows many squeaking rales over the chest, as does it also show a systolic murmur at the apex impulse and strongly transmitted to the left, double murmur over lower half

of sternum no murmur could be recognized at the base of the heart. The blood pressure readings were as follows:

BY AUSCULTATION—Systolic 154 m. m. Diastolic 40 m. m. making a pulse pressure of 114 m. m. which is nearly 300% of the diastolic. 1st, phase—154—140. 2d, phase—140—130, and very loud. 3d, phase—130—40, very clear and strong and of the "pistol shot" variety. The 4th, phase is constant and continues after all air is exhausted from the cuff.

After one week of absolute quiet and medication the heart had quieted down and the area of dulness had greatly reduced in extent, a diastolic murmur could be plainly heard over the aortic cartilage, a double murmur over the lower half of the sternum and a systolic murmur at the apex proving to my reasoning a diagnosis of aortic insufficiency with a compensatory mitral leakage. The bloodpressure reading at this time was as follows:

Systolic 152 m. m. Diastolic 65 m. m. making a pulse pressure of 87 m.m. which is about 133% of the diastolic. This percentage is nearly double that of any other heart lesion I have observed. A strong systolic with a low diastolic pressure is always suggestive of aortic insufficiency; why? Because a powerful heart is filling an arterial system in which the bottom has dropped out or in other words the aortic valves fail to support the recoil of the blood in the vessels which is necessary to sustain the pressure during diastole. In the above instance to my mind, the bloodpressure readings alone were sufficient to make a tentative diagnosis of a powerful degenerated heart leaking at the aortic valves.

Six years ago I reported a case of Heart Block in which the bloodpressure readings were very interesting to me at that time; As the column of mercury ascended very closely to the maximum systolic pressure certain impulses or pulse waves began to drop out and finally only one in about ten reached the wrist showing a difference in the strength of individual heart beats. At the post mortem, in that heart was found, besides the condition producing "heart block," a state of fatty degeneration so extreme that almost the entire heart muscle was converted into fatty tissue. Since that time I have learned to connect this "missing" of beats however slight, with degeneration of the heart muscle or at least with an insufficiency of it and have never failed to find it in blood pressure readings which afterward proved by post mortem that the heart was degenerated.

This anomaly in the reading I have found extremely reliable as a sign of failing compensation even when no other sign of it is present. It is especially valuable in cases of chronic interstitial nephritis in which, under a high pressure, the heart is tottering. I have records of a case of this nature in which by reducing the bloodpressure from 210 m. m. down to 185 this phenomenon would disappear showing to my mind that the heart had regained its equilibrium.

A young man whom I have been treating for rheumatism, tonsillitis and mitral insufficiency during the past 5 years, recently returned for examination and I find that a very pronounced diastolic murmur has developed, since my last examination in February. His heart is not greatly hypertrophied,

there is none of the phenomena which usually attend aortic insufficiency such as the waterhammer pulse and capillary pulsations, but the murmur could be mistaken for an aortic insufficiency.

The greatest intensity of the new murmur is situated at the junction of the 3d, left rib with the sternum and is transmitted directly downward along the left border of the sternum for about 2 inches. A double murmur is faintly heard at the aortic cartilage and down the sternum; The systolic murmur of the old mitral insufficiency is still present.

Theoretically insufficiency of the pulmonary valves should give a different reading to that of aortic insufficiency unless it were possible to take the pressure readings of the pulmonary system in which case we could expect similar characteristics, in as much as the systolic and diastolic pressures would be widely separated owing to the fact that the bottom had dropped out of the pulmonary system in a manner similar to that which has taken place in the general arterial system from aortic insufficiency. The blood pressure readings in this case lends strength to the observation and to my mind proves the lesion in question to be at the pulmonary orifice instead of at the aortic.

The bloodpressure readings in this case are as follows:

BY PALPATION—Systolic 125 m. m.

BY OSCILLATION—Diastolic 75 m. m. making a pulse pressure of 50 m. m. which is 75% of the diastolic as contrasted to a percentage of 133 to 300 in aortic insufficiency.

BY AUSCULTATION—Systolic 130 m. m. Diastolic (end of 3d, phase and corresponding to lowest point of greatest oscillations) 75 m. m. making a pulse pressure of 55 m. m. which is about $82\frac{1}{2}\%$ of the diastolic.

The Phases were as follows: 130 1st, 125 2d, 105 3d, 75 4th, 30 5th. The 2d, phase is fairly strong and can be readily produced by the pressure of a finger on the artery, suggesting anemia very strongly. The 3d, phase is weak and on the 2d, day following, when the patient was feeling very badly the 3d, phase could with difficulty be distinguished from the 4th.

A case of chronic nephritis with greatly hypertrophied heart in which the aortic valves close with a sharp ringing sound showing their competency; gives the following reading:

BY PALPATION—Systolic 175 m. m. Diastolic (By oscillation) 90 making a pulse pressure of 85 which is about 88% of the diastolic, this is just what we would expect to have in a powerful heart with competent aortic valves.

By Auscultation the phases in this case are very similar to those found in aortic insufficiency because we are dealing with a powerful heart in both instances but the essential difference is lacking and that is the large pulse

pressure, the wide range between the systolic and the diastolic pressures.

The phases are as follows: 170 1st, 165 2d, 150 3d, 90 4th. The 4th, phase having a tendency to continue indefinitely as in aortic insufficiency.

A case of well compensated mitral insufficiency which I have observed for the past 6 years and in which the heart has become fully doubled in size, larger in proportion in fact than in the case of chronic nephritis cited above, and in which the aortic valves can be heard to close plainly and clearly and yet we have weak phases and a low pulse pressure in this case, why? Is it because the bottom has dropped out of the systole? We have the hypertrophied heart and the competent aortic valves; Is it because the heart muscle is weak?

The bloodpressure readings are as follows:

BY PALPATION—125 m. m. Systolic.

BY OSCILLATION—70 m. m. Diastolic.

Making the pulse pressure about 78% of the diastolic.

BY AUSCULTATION—130 1st, 120 2d, 110 3d, 70 4th, 65 5th. In a future paper I hope to be able to tell something about mitral insufficiency in its relation to bloodpressure readings.

Cesarean Section for Albuminuria.

Reprinted from Case Report by Francis T. B. Fest, M. D., Las Vegas, N. M.

Cesarean section is coming into its own and the unwarranted dread of this operation is disappearing. I do not report this case for any new feature or phase in diagnosis or technique, but solely for the clinical aspect justifying the interference and on account of the rapid recovery from the symptoms demanding the operation.

The patient is a married woman, Spanish-semitic, aet 30, v-para. The husband underwent specific treatment for secondary lesions the fall before. She presented herself in May, suffering from pains in the abdomen, irregular bloody discharge and a skin eruption. The pains were in the lower right region, aggravated when standing, disappearing gradually when prone.

On examination we found large veins around the anus, and in the vulva and vagina; the uterus was soft and large. A soft mass, about the size of a small orange, could be distinguished in the right broad ligament. This mass could be compressed and reduced itself greatly when lying down. The youngest child was ten months old and still nursing. The complement reaction was positive. I made the tentative diagnosis of varices in the right ligament, pregnancy in the 4th to 5th month and lues. The patient lived in the country, domestic affairs demanded her presence at home, and all we could do at that time was to begin antiluetic treatment. Thereafter the

woman lost flesh, began to suffer from dull headaches, pain through the body, malaise, obiguria and painful micturation. Fetal movement was felt in the latter part of June.

The patient entered the hospital in September. The eruption had disappeared. The abdomen was rather small for the period of gestation. The mass in the right broad ligament had transformed itself into a ridge leading to the right side of the fundus uteri. The mucous membrane over the enlarged veins in vulva and vagina had broken down and these ulcerations caused the suffering during urination. Micturition was frequent and scanty, less than 300 cc. in twenty-four hours. Urine highly albuminous, with casts and blood. Pulse 120 and weak. The facial expression was not good, the mentality indifferent. The usual medication was undertaken, but without result. The albumin increased so that the test-tube contained a solid mass after boiling.

Dr. E. B. Shaw saw the case in consultation and we observed the patient a week longer without the slightest benefit. The child was viable at that time, yet its fate, if pregnancy were allowed to progress, was doubtful at the very best. Considering the danger of infection from the ulcerated vagina, considering the abnormal condition within the abdomen and considering the good results from Cesarean section in clean conditions, we decided on hys-

terotomy as the safest for the mother and perhaps the only chance for the child. Decapsulation of the kidneys would follow if the interruption of the pregnancy would not bring about the desired result.

The operation took place October 11. We made the classical incision. The ovarian veins on the right side formed a finger-thick strand of varices; the ovary itself was so absorbed by a vascular mass that only a trace of the glandular structure was remaining.

After the removal of the child a Porro operation was done and the varicose plexus excised. The *left* side

was varicose in a slighter degree, but also demanded ligation of the veins. We proceeded as radically because the circulation was too disturbed to trust that the puerperal uterus would take care of itself without infection on account of the condition in the vagina.

Recovery was speedy. The woman left the table with a very improved pulse. Polyuria started within ten hours and on the third day all albumen had vanished and with its disappearance the mental condition had become normal.

The child, somewhat deformed, succumbed within an hour after the operation.

BOOK REVIEW

Surgical After-Treatment. By L. R. G. Crandon, M. D., Assistant in Surgery at Harvard Medical School, and Albert Ehrenfried, M. D., Asst. in Anatomy at Harvard Medical School. Second edition, practically rewritten. Octavo of 831 pages, with 264 illustrations. Philadelphia and London: W. B. Saunders Company, 1912. Cloth, \$6.00 net; Half Morocco, \$7.50 net.

Surgical After-Treatment fills a place that is greatly needed to supplement our works on general and special surgery. In these works the time and space is devoted to, and utilized for, the history, course, diagnosis, and treatment—including operative—of the case and as a rule the after handling receives comparatively little consideration. This work is general, comprehensive and explicit. In the hands of an operator away from the surgical centers it would be of incalculable value, and the comfort and safety of the patient would be greater than probably it otherwise would be. To the surgeon with a smaller experience, and with curtailed opportunity to visit the larger clinics for studying and observing the methods and technique of the abler men, it would greatly enhance his usefulness to his clientele. To him conducting a private or small hospital it would be invaluable because of presenting the latest, tried, and approved methods as demanded in post-operative technique, and would enable him to elevate the institution to a higher standard than if left to his own resources. In the hands of an exper-

ienced operator an operation is completed in a short time, and this is the least of the worry, as it is then that the uncertainty of the success of the operation for the patient begins, and this is determined in the first few days to follow, and it is during these first days that so much of the success depends, and this success depends in a great measure upon the way the case is handled. Many exigencies and emergencies arise during the first hours and days of convalescence and if these are met promptly and accurately, the tide is often turned for the patient. If the opportunity is not seized upon then death will very surely follow, or a delayed convalescence, entailing much suffering and discomfort. If those things given in this work are followed out, until further experience evolves better ones, the operator, or the practitioner in charge of the case after operation, will not go far wrong, and the utilized knowledge will greatly accrue to his benefit. The reviewer has read with considerable pleasure those portions of the work which time permitted him, and without reservation can recommend the work to all who have to do with surgical practice, realizing that it does fill a need that does exist in our works on general surgery. I will not give a synopsis of the subjects treated, as these can be had for the asking from the publishers, and would be far more satisfactory and complete.

T. C. S.

An Essay on Hasheesh, including Observations and Experiments by Vic-

tor Robinson, Contributing Editor, Medical Review of Reviews, Pharmaceutical Chemist, Columbia University; Member of the American Chemical Society; Author of Pathfinders in Medicine. Fifty cents, net, Medical Review of Reviews, 206 Broadway, New York.

This little volume on a subject little known in the general profession is well worth the price. It gives to the student food for thought along therapeutic lines of which little is known. Dr. Robinson has made an exhaustive study of the hemp product and his little work has a useful place in the library of every student of medicine.

S. D. S.

PELLAGRA.

History, Distribution, Diagnosis, Prognosis, Treatment, Etiology, by Stewart R. Roberts, S. M. M. D. Price two dollars and fifty cents. C. V. Mosby Company, St. Louis.

A splendid work upon a subject that should be carefully studied by every practitioner of medicine. The analytical divisions of the subject and the graceful style of the author make the book as interesting as a novel and as valuable as any text book. To the preparing student, the city physician and the country doctor it will prove a lamp and guide post to useful knowledge. The country doctor sees pellagra most often and recognizes it most seldom. He, of all medical men, needs this book the most. There are many cases of pellagra which go down to the grave without a diagnosis. He who reads this book written by a gifted son of the South will recognize his enemy on first sight.

S. D. S.

The Surgical Clinics of John B. Murphy, M. D., at Mercy Hospital, Chicago. Volume I, Number III. Octavo of 174 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1912. Published Bi-Monthly. Price per year: Paper, \$8.00. Cloth, \$12.00.

The third number of volume one of Murphy's clinics has recently been issued. The numbers continue to grow in interest and value. A feature of the present number is the report, with photographs and skiagramm of the cases previously mentioned, showing improved conditions and results in general.

We predict that these quarterly "Clinics" will grow in favor as they become better and more widely known.

The House-Fly, Disease Carrier, by L. O. Howard, Ph.D., Chief of U. S. Bureau of Entomology. \$1.60 net, Frederick A. Stokes Company, New York.

We desire to call especial attention to this book of Howard. Careful investigations have demonstrated the fact that the fly is a dangerous pest, carrying disease germs with which to spread death and destruction. Doctor Howard is no stranger to the people in this country, his work with mosquitos and other pests having established for him a place in the scientific world. In this book he describes the nature of the common house fly, its habits and methods of breeding, and proves conclusively his case against the fly as a disease carrier. A most interesting section is that in which he describes preventive measures and remedies.

As the prospectus to the book says:

"The extermination of the house-fly is much to be desired as a means to public health, but it can only be accomplished by the widest publicity and a full understanding of the subject."

We most heartily recommend this easily understandable work to our readers and the general public.

Audel's Answers on Automobiles,
For Owners, Operators, Repairmen.
By Gideon Harris and Associates.
Theo. Audel & Co., Publishers, 63
Fifth Avenue.

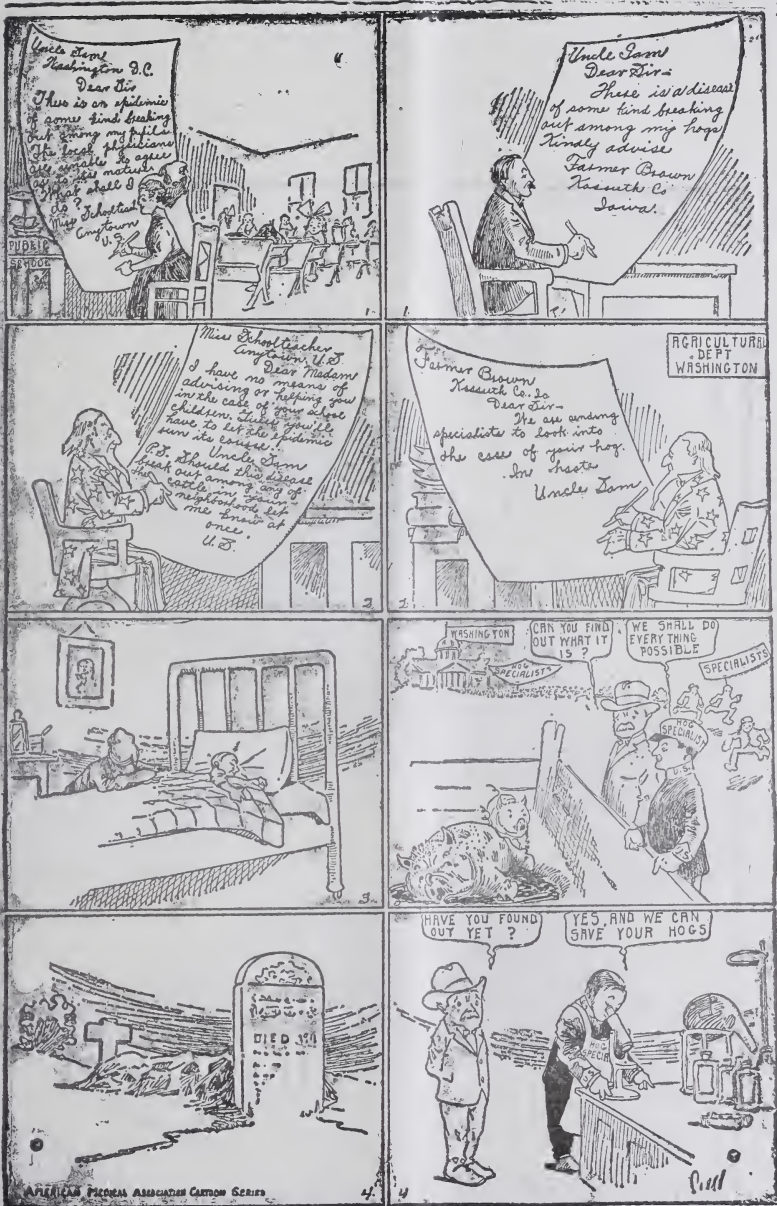
The automobile having become one of the necessities of the busy physician's life, we have consented to give space in this issue for a review of this particularly valuable little book of information about automobiles.

The subject matter is presented in the form of questions and answers, the answers being short and directly to the point.

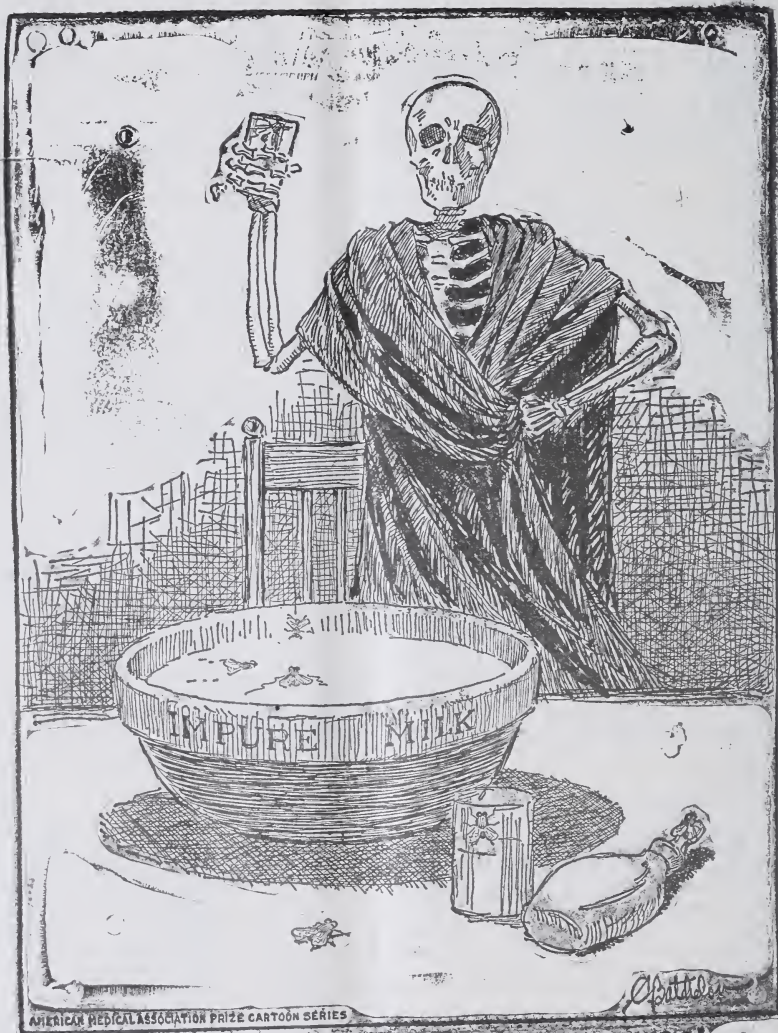
The contents of the book are so arranged as to be easily found and the various chapter headings are a further guide to the searcher.

A most comprehensive index, for such a book, is an interesting feature of the work.

So well pleased are we with the book that we have made an arrangement with the publishers whereby we are able to offer to our readers the book at the price of one dollar and a half. On another page in the advertising section will be found a coupon which when properly filled out will bring the book to any of our readers.



DEATH FOR THE CHILDREN—CURE FOR THE HOGS



AMERICAN MEDICAL ASSOCIATION PRIZE CARTOON SERIES

"I DRINK TO THE GENERAL DEATH OF THE WHOLE TABLE"

The New Mexico Medical Journal

Volume VIII

SEPTEMBER, 1912

No. 6

E · D · I · T · O · R · I · A · L

The New Mexico Medical Journal is not responsible for the opinions expressed by any of its contributors.

THE NEW MEXICO MEDICAL JOURNAL.

With this issue the New Mexico Medical Journal completes its eighth volume and another year of its existence. It is no longer an experiment. The Journal has become a necessity and the future is bright. Beginning as a quarterly, it gradually developed into a bi-monthly and two years ago became a monthly. The work of the "pioneers" has been completed.

One thing has become apparent and that is the absolute necessity for more local support. The members of the New Mexico Medical Society have not all realized that this is their Journal and that they should enter into its work with a determination to help it out financially by the securing of suitable advertising matter as well as by scientific communications and papers. The present managing editor has no fault to find with the support that he has received but with greater support in the way of more advertising (for from advertising alone can the Journal be expected to make both ends meet) a better Journal can be published.

We commend to the Council and to the members of the Society a better and greater Journal aided and supported

ed by the united profession of the State and the Southwest.

During the past year we have added about one hundred to our circulation and a few more are expected soon. As soon as the circulation warrants, the advertising rates can be made more profitable, but without circulation we cannot hope to receive the attention of the larger advertisers.

For the future then, the managing editor bespeaks the united and earnest support of the members.

AMERICAN ASSOCIATION OF CLINICAL RESEARCH

The fourth annual meeting of the American Association of Clinical Research will be held in New York City, at the Academy of Medicine, on November 9, 1912.

The sessions will be held from 9 a. m. to 1 p. m., from 3 p. m. to 6 p. m., and from 8 p. m. to 10 p. m. The evening session will be open to the public.

Notable contributions on the Negri Bodies, on certain Fluids for Tubercle Bacilli in the Urine, on Adjustment and Function, on Psychoanalysis and Traumbedeutung, on a Pandemic of Malignant Encapsulated Throat Coccus, on The Single Remedy on Indi-

canuria and Glycosuria, on Disease Conditions expressive of Correct Diagnosis, on Biochemic Problems, on The Two Most Far-Reaching Discoveries in Medicine, and others are to be given. Every member of the Association is cordially invited to contribute a paper. The title should be sent at once to the Permanent Secretary, so that the program may be completed.

As soon as completed, the program will be mailed to you. Please make an

effort not only to contribute a paper, but to be present at the coming meeting, to bring your friends, and to assist in the most important movement of medicine as represented in the aim of our Association, the systematic, scientific investigation and advancement of medicine by conclusive clinical and clinically allied methods.

Members of the New Mexico Medical Society are invited to become members of the above organization.

The General Program for Meeting of the New Mexico Medical Society to be Held in Roswell, on Sept. 12, 13, and 14.

THURSDAY, SEPTEMBER 12TH.

8 A. M.—Registration at Secretary's desk.

9 A. M.—Meeting of House of Delegates.

10 A. M.—General Meeting.

Call to order by President R. L. Bradley of Roswell.

Invocation by Elder M. C. Hughes, Roswell.

Welcome Address on behalf of City by Mayor W. M. Atkinson.

Welcome Address on behalf of Chavez County Medical Society, by Dr. J. W. Kinsinger, Roswell.

Response to Welcome Addresses by Dr. F. F. Doepp, Carlsbad.

Recess for dinner.

1:30 P. M.—Meeting of Council.

2:00 P. M.—Meeting of House of Delegates.

2:30 P. M.—General Meeting.

Scientific work, *Section on Medicine*.

Chairman's Address—The Practice of Medicine, Past, Present and Future. S. D. Swope, M. D., Deming, N. M.

The New Mexico Laws on the Practice of Medicine; What We Need in the Way of Legislation. Dr. A. J. Evans, Elida, N. M.

Discussion opened by Dr. C. M. Yater, Roswell, and Dr. J. H. Wroth, Albuquerque.

Medical Standards, the Profession and the Laity. W. M. Lynch, M. D., Midland, Texas (Fraternal Delegate from the Texas State Medical Society).

Discussion opened by Dr. W. R. Tipton, East Las Vegas; Dr. T. C. Sexton, Las Cruces.

Municipal Hygiene. Dr. C. M. Mayes, Roswell.

Discussion opened by Dr. J. J. Shuler, Raton; Dr. S. D. Swope, Deming.

Pellagra in the Pecos Valley. Dr. Chas. F. Beeson, Roswell

Discussion opened by Dr. W. T. Joyner, Roswell; Dr. C. E. Cantrelle, Greenville, Texas.

Acute Polio Myelitis. Dr. M. K. Wylder, Albuquerque.

Discussion opened by Dr. S. G. Von Almen, Clovis; Dr. L. G. Rice, Albuquerque.

8:00 P. M.—Public Meeting.

Address by Dr. C. E. Cantrelle, Greenville, Texas.

FRIDAY, SEPTEMBER 13TH.

8:00 A. M.—Meeting of House of Delegates.

9:30 A. M.—Meeting of Council.

10:00 A. M.—Scientific Program.

Section on Medicine. (Continued.)

An Obscure Infection. Case Report. R. E. McBride, Las Cruces.

Discussion opened by Dr. F. C. Prentiss, El Paso, Texas; Dr. J. W. Colbert, Albuquerque, N. M.

Malta Fever, Report of Cases. W. W. Waite, El Paso, Texas.

Discussion opened by Dr. C. M. Mayes, Roswell; Dr. F. De la Vergne, Albuquerque.

Malnutrition of Breast-Fed Babies. Dr. M. G. Cartwright, Albuquerque.

Discussion opened by Dr. H. A. Ingalls, Roswell; Dr. W. G. Cowan, Carlsbad.

Section on Specialties.

Chairman's Address, Title to be announced. Dr. D. D. Swearingen, Clovis, N. M.

Salpingitis. Dr. W. T. Joyner, Roswell, N. M.

Discussion opened by Dr. James Vance, El Paso, Texas; Dr. F. T. B. Fest, East Las Vegas.

The Tonsil. Dr. T. W. Crowder, El Paso, Texas.

Discussion opened by Dr. Clifford S. Losey, East Las Vegas; Dr. C. M. Mayes, Roswell.

1:30 P. M.—Meeting of House of Delegates.

2:30 P. M.—General Meeting.

Scientific Work—Section on Specialties (Continued).

Observations on Oesophageal Diseases. Dr. E. C. Prentiss, El Paso, Texas.

Discussion opened by Dr. J. W. Colbert, Albuquerque; Dr. E. B. Shaw, Las Vegas.

Gonorrhoeal Urethritis and Complications of Gonorrhoea. Dr. J. J. Walker, Dexter, N. M.

Discussion opened by Dr. S. D. Swope, Deming; Dr. J. W. Kinsinger, Roswell.

The Intra Tubal Pathology of Ectopic Gestation, Illustrated with 100 slides. Dr. Hugh Crouse, El Paso, Texas.

Discussion opened by Dr. C. E. Cantrelle, Greenville, Texas; Dr. Charles F. Beeson, Roswell.

Acute Dilatation of the Stomach; Etiology and Treatment; Report of Cases. Dr. F. D. Garrett, El Paso.

Discussion opened by Dr. W. W.

Lynch, Midland, Texas; Dr. J. R. Haney, Jr., Clovis.

8:00 P. M.—Annual Banquet, Gilkeson Hotel, \$2 per plate.

SATURDAY, SEPTEMBER 14TH.

8:00 A. M.—Meeting of House of Delegates.

Election of Officers.

9:30 A. M.—Meeting of Council.

10:00 A. M.—General Meeting.

Scientific Work resumed.

Section on Tuberculosis. (Under charge of New Mexico Society for the Study and Prevention of Tuberculosis.)

Racial Prophylaxis in Relation to Tuberculosis. Dr. F. T. B. Fest, East Las Vegas.

Discussion opened by Dr. P. G. Cornish, Albuquerque; Dr. Hugh Crouse, El Paso.

The Use of Tuberculin by the General Practitioner. Dr. A. G. Shortle, Albuquerque.

Discussion opened by Dr. T. C. Sexton, Las Cruces; Dr. J. A. Massie, Santa Fe.

Remarks on Tuberculosis to the Laity. Dr. L. S. Peters, Silver City, N. M.

Discussion opened by Dr. H. V. Fall, Roswell; Dr. M. G. Cartwright, Albuquerque.

When One of the Family Develops Tuberculosis. Dr. James W. Laws, Lincoln, N. M.

Discussion opened by Dr. J. W. Colbert, Albuquerque; Dr. D. D. Swearingen, Clovis.

The Need for a Vital Statistic Law in New Mexico. Charles G. Given, Assistant to the Secretary, New Mexico Society for the Study and Prevention of Tuberculosis. Silver City.

Discussion opened by Dr. A. J. Evans, Elida; Dr. W. M. Lynch, Midland, Texas.

1:30 P. M.—Meeting of House of Delegates.

2:00 P. M.—General Meeting. Scientific work resumed.

Section on Surgery.

Chairman's Address, Title to be Supplied. Dr. P. G. Cornish, Albuquerque, N. M.

Septic Peritonitis. Dr. James Vance, El Paso, Texas.

Discussion opened by Dr. J. H. Wroth, Albuquerque; Dr. W. L. Brown, El Paso, Texas.

Advantages of Combined Abdominal and Trans-pleural Operation for Liver Abscess, with lantern slide illustrations. Dr. W. L. Brown, El Paso, Texas.

Discussion opened by Dr. F. W. Noble, Tucumcari; Dr. E. B. Shaw, Las Vegas.

Report of Secretary to General Meeting of Transactions of House of Delegates.

Introduction of President-Elect. Meeting of Council.

Recess.

8:00 P. M.—Public Meeting.

Address of Retiring President (President's Annual Address). Dr. R. L. Bradley, Roswell.

Memorial Address. Dr. C. E. Lukens, Albuquerque.

Adjournment.

All papers, except the addresses of Section Chairmen, limited to 20 minutes.

All papers read become the property of the Society and will be published in the New Mexico Medical Journal.

CHOLELITHIASIS, WITH CASE REPORTS

By F. W. Noble, M. D., Former Chief Surgeon Oklahoma Methodist Hospital; Surgeon to Tucumcari Hospital; Local Surgeon to the E. P. & S. W. System; Member Quay Co. Med. Soc., New Mexico Med. Soc., and the American Med. Ass'n. Read before the 30th Annual Session of the New Mexico Medical Society, East Las Vegas, Sept. 6-9, 1911.

Gallstones seem to be common in most vertebrate animals. They are quite common in oxen and hogs. Mostly they are found in the gall-bladder, cystic duct and common duct, rarely within the hepatic and its branches within the liver. Osler says that evidence is wanting to show that they are formed in the liver ducts except in rare instances. Those formed in the hepatic duct are very small and may generally be disregarded in the treatment of gall-stone disease. They are developed in the liver in some cases of stagnation of bile; but even then the gall-bladder is the primary seat of the disease. Notwithstanding these statements, McArthur reports a case where the calculus developed in the intra-hepatic ducts. Chopart reports a case, in which the liver could scarcely be cut, because of the numberless stones within the intrahepatic ducts. They are found more often in cold climates than in warm.

Ochsner found that 4 times as many women suffered from gall-stone as men and Johnson says that the disease is 5 times as frequent among women as men. A theory gives as a reason, for this greater frequency in women, the distortion of the passages caused by tight lacing; and pregnancy is also

thought to be a predisposing factor. It has been shown that tight lacing may force the gall-bladder out of its normal position, thus producing distocia of the gall passages.

Age seems to have a great influence in the production of gall-stones, supposedly because in old age the muscular tissue about the bile passages atrophies and the normal movements of the bile are therefore interfered with.

Another factor may be the fact that, after middle life, the economy no longer needs a large supply of material for growth of the body; but these people, although past this age, still continue to eat more than is necessary for simple repair of the normal waste of the body. This rich diet and self indulgence coupled with a lack of physiological exercise favors the production of calculi. Gallstones are exceedingly rare in infancy; but Walker reported a case in a child of three months; another case has been reported at the age of 12 days. Frerichs has reported a case in a child of 7 years, and Symons a case in a child of 6 years; but they are acknowledged to be quite rare under 20 years and uncommon under 30 years. A. J. Oschner in a large series of cases had only one patient under 30

years, while A. R. Edwards says that 50 per cent occur after 40 years, and that they are exceedingly rare under 20 years. Mayo says they are rare under 25 years. One of the cases I shall report is from a young girl 16 years old, who was referred to me by Dr. John T. Widney of Kaw, Okla., from whom I removed 13 stones. 3 of these were in the cystic duct.

They are very commonly found in cancer of the liver, but seldom found in cirrhosis of the liver.

75 per cent of all cases have a history of a preceding enteric fever. I shall try to show the reason for such a history, a little later in my paper.

There are several theories fixing the cause of gall-stone formation. It seems to me that no one in itself sufficiently accounts for the condition, but that truth is to be found by combining them. Infection undoubtedly plays an important part and this infection is favored by stasis in the portal circulation. Some have thought that this infection of the bile passages took place through the papilla from the duodenum; but this statement of its route has been proven false because we can readily infect the bile passages after a ligature has been thrown around the common duct. From this it will readily be seen that infection in such cases does not reach the gall passages from the intestine. Then again when an inflammation of the liver is produced by the administration of arsenic and the experimental animal is fed some easily recognizable organism, this can be demonstrated in the bile passages. This seems to demonstrate that infection in this experiment takes place by way of the portal veins. Then again, the bacteria causing cholecystitis are

not commonly found in the duodenum. The bile in healthy persons has been shown to be sterile and, if the arsenic is omitted in the foregoing experiment upon a healthy animal, the bile is found sterile; in fact all authors and experimenters seem now agreed that the healthy liver removes bacteria from the blood of the portal vein; but in the infective fevers and in the face of any condition or formation producing stasis in these organs the liver fails to do its filtering or destroying and an infective process in the bile passages is the result, for it has been shown that the blood of the portal vein always contains bacteria; but the bile is sterile if conditions are normal. Without stasis there seems to be no development of infection in these parts, for even tho' artificially we introduce bacteria into the bile the current of flow carries them out into the intestine.

We know that infection of the gall-bladder is by no means infrequent after certain infections, notably typhoid, as all of us know, a sharp exacerbation of temperature or a temperature unduly prolonged in enteric fever is often to be accounted for by a very evident cholecystitis. Authorities tell us that the typhoid bacillus can be found in the gall-bladder 70 years after an attack and in a series of 30 autopsies, upon patients dead with typhoid, the bacillus was found in the gall-bladder in 21 cases.

The most common bacteria to cause cholecystitis are the colon bacillus and the bacillus typhosus although occasionally the streptococcus pyogenes and the staphylococcus are causes; and in case the two latter organisms are found the chemical nature of the stone is lime salts, as neither of these bacteria cause

a precipitation of the cholesterine.

Exsner says that the salts of the bile acids precipitate 10 times more markedly after the addition of the bacillus typhosus to the bile than upon the addition of any other germ. Gall-stones are not the product of *acute* infections, but require for their production a low grade of infection with a certain degree of bile stasis. As a result of inflammation of the mucus membranes of the bile passages there is lessening of their lumen and consequent stasis. After infection and obstruction the gall-bladder becomes filled with detritus, dismantled mucus membrane cells, in which small particles have become deposited and act on centers of concentration. Some of these act as nuclei and others gather around this nucleus as in the specimen I will show from a young girl in which the stones are shown in the process of formation.

The cholesterine in gall-stones is thought to be a product of the inflamed mucosa of the gall-bladder and not from the bile itself. The nucleus of a calculus may be a clump of bacteria, epithelium blood clot, cholesterine, calcium salts, bile pigment or rarely a foreign body, as future growth is carried on by the deposition of more solid matter around the nucleus and the coalescing of smaller calculi to make larger.

Obstruction as a cause of gall-stones may arise from adhesions of the gall-bladder or bile passages to other organs, as between the stomach and duodenum and liver or gall bladder, or it may result from a bending of the common duct or, as is more frequently the case, the cystic duct, by the drawing power of other adhesions. I operated on a patient recently for appen-

dicitis, whose gall-bladder was enclosed in a mass of adhesions resulting from a cholecystitis from typhoid 10 years before. Such adhesions may be the result of gastric ulcer or cancer or duodenal ulcer.

Mayo says that the time required for the formation of gall-stones varies from a few days to a few weeks.

Gall stones vary in size from the size of sand to a concretion of 5 inches long. The largest seen are commonly rounded or oval in shape. The smaller calculi are more numerous and are wedge shaped or faceted, this being caused by mutual pressure. Gall stones are never lighter than water when first removed from the body. Only after drying do they float, if at all. Their consistence, when in the body, is usually rather soft. They are, at that time, capable of being molded by the fingers.

Gall-stones in the liver are composed of calcium and bilirubin; those within the gall-bladder vary in composition. Some are wholly composed of cholesterine, and most contain from 70 to 80 per cent of this substance. They also contain traces of copper and iron and magnesium. Lime salts of the fatty acids also enter into their composition. The color of gall-stones varies: biliverdin imparts a green color and bilirubin a brown. Calcium carbonate stones are rare and are of a grayish color. Cholesterine stones are not common. They are translucent when they are first removed and become opaque when dry. One of the specimens shown is of this variety. They are both light in color and weight. Stones vary in size from a grain of sand to the size of an egg. The heaviest reported weighed four

ounces. In shape they are usually rounded and rarely spinous. When multiple they are polygonal and faceted. The intra-hepatic stones are cylindrical or branching like coral. As I have had a chance to note in a 16 year old patient groups of stones are frequently about the same size and are presumably of the same age. It may thus be inferred that they originated about the same time and from a common cause.

Paulsen asserts that 95 per cent of gall-stone cases complain of no symptoms. Real says that 20 per cent have no colic, which implies that this number either are troubled with only the fine sand-like stones or that the tissues of the biliary tract are relaxed. The symptom most looked for is the colic, which is said by some to be mainly due to the attempt of the stone to migrate. This attempt produces spasm of both the common and cystic ducts. Others consider that inflammation is the chief factor in causing the colic, and that it moves onward by the exudation it induces. It is thought that the stone or stones may be started onward by palpation. Anyway spasmodic contractions of the stomach will cause corresponding contractions in the gall-bladder and if we empty the stomach, by washing, in colic, and allow no further food or drink by mouth, thus stopping peristalsis in the stomach, the pain in the gall-bladder ceases at once. It has subsided because we have put the stomach at rest.

Chills and fever occur in 60 per cent of the cases and probably indicate bacterial inflammation as shown by the leucocytosis and the septic factor. A temperature of from 101 degrees to 104 degrees is not infrequent.

In 33 per cent of the cases the gall-bladder is palpable, as a rounded tumor, in the upper right quadrant of the abdomen. This tumor is caused by the distension of the gall-bladder, either with stones or with fluid which has been dammed up by either the lodgment of stone or stones in the cystic or common duct or by the shutting off of the duct by the swelling of the mucous membrane of the duct by inflammation. Under these conditions hydrops of the gall-bladder ensues. The retained bile becomes modified by interchange of constituents with the lymphatic fluids. The cholates early disappear. The pigment follows the disappearance of the cholates and finally a clear fluid is left, which contains salts and cholesterine, nucleo-albumen and characteristic proteids. I saw several gall-bladders, which were as large as the kidney, in size, after this distension. If bacteria are present in such a gall-bladder, they may cause suppuration, or the inflamed wall may ulcerate and thus become adherent. It may perforate and cause peritonitis.

Where the gall-bladder is small and atrophic, there is usually a stone in the common duct or only one stone in the gall-bladder, which has contracted down firmly around the calculus; so that the gall-bladder may be almost as small as the last phalanx of the little finger or again it may be large enough to hold a pint of fluid.

Icterus is present in 10 to 20 per cent of all cases and I believe that the conjunctiva will be found slightly yellow in *nearly all* cases. The icterus may be due either to mechanical or inflammatory causes.

If the common bile duct be obstructed and if the liver continues to secrete

bile, then the bile passages become filled and the pressure of the bile within constantly increases, even in the liver ducts, forcing the hepatic cells apart and the bile is forced into the lymphatic system or directly into the blood. This then enters the general circulation and through it permeates all the body organs. The bile pigment is deposited in the various tissues, and the skin assumes the color, which varies from yellow to dark green or brown. Whether the color of the skin arises from a blending of the bile pigment with the skin or whether they are due to a conversion of bilirubin into other pigment, has not been worked out. It is of interest to surgeons to know that the presence of these bile salts in the blood is the cause of the dangerous predisposition to hemorrhage which is found in these cases.

Deaver believes that icterus is due to inflammation of the pancreas. Especially is this slight tinge of yellow to be found during the subacute attacks. Itching is present if there is enough of the bile salts in the circulation to irritate the skin, and perspiration is often present during an attack of colic, *herpes labialis* sometimes.

During the paroxysm during violent attacks the pulse is frequently rapid and there may be extreme prostration and even collapse. Naunyn records nine cases where death occurred during the attack. Reflex contraction of the pulmonary capillaries may take place, and put the right heart to extra work, and cause dilatation of that organ.

Cholecystitis produces degenerative changes in the heart muscle causing a chronic myocarditis. Removal of the calculi and drainage of the gall-bladder effects a great change, for the better,

in many of these cases. I have seen cases which were not operated upon go for weeks with a temperature ranging from 101 to 102 and a pulse rate ranging from 120 to 130 with great toxemia and nausea, with often frequent vomiting. On the other hand patients suffering from gall-stones frequently have a pulse that is slower than normal, which we think is explained by the toxemia. This bradycardia is also a very significant feature of liver injuries.

Migraine is sometimes produced by reflex action. The pain of gall-stone colic is usually sudden in onset and seems prone to occur at night. The pain is great and nothing but a large dose of a narcotic seems to do much in relieving it. The pains may be more severe than labor pains in the female. It usually begins in the right upper quadrant of the abdomen and may radiate to the back and the neck, the hypogastrium, the left side, and even to the arms, legs and testes or chest. Irregular or large stones cause the greatest agony. The pain lasts from a few minutes to several hours, and may soon recur. It is independent of the meal hour or the ingestion of food. The gall-bladder is always tender, there being hyperesthesia over the ninth costal cartilage or over a point two-thirds the distance from this landmark to the navel. Someone has described a hyperesthetic zone, which lies between the spine and the post-axillary line at the level of the lower dorsal or upper lumbar vertebra. In some cases chills, delirium or convulsions or hysterical manifestations may be precipitated. These colicky pains are caused by the inflammation and distension of the gall tract and by the

spasmodic action of the muscular tissue in the gall-bladder and the gall ducts. In some cases the attack is precipitated by the passage of a small stone from a wide to a narrow portion of the tract as at the entrance to the cystic duct or from some place in the common duct to the entrance of the common duct into the papilla of the duodenum; yet such is not always the case, as a gall-bladder, which contains large stones and is isolated by an old occlusion of its duct, is frequently the seat of colic. Indeed colic may come from a gall-bladder which contains no stones whatever. I had a case recently, which exhibited these colicky pains; but at the operation had no stones, either in the gall-bladder or in the ducts, but which was surrounded by adhesions. A feeling of weight or burning in the stomach is felt after meals as well as distension of the abdomen. Dull pains extending to the right, from the epigastrium about the level of the 10th rib to a point near the spine and upwards into the right shoulder blade, also pain and tenderness on pressure between the right costal cartilages and the umbilicus are very characteristic of biliary colic.

Among the physical methods to elicit gall-bladder tenderness in cholecystitis, I particularly wish to commend Murphy's hammer stroke percussion and his deep grip palpation. There is also pain on palpation during a deep respiration, pressure being made about the ninth or tenth cartilage.

The sclera varies from a deep yellowish green color to the faintest tinge of yellow.

The tongue is always coated, usually with a yellowish or brownish coating and the patient nearly always com-

plains of a bad taste in the mouth, especially in the mornings. Nausea and vomiting are the rule during the attacks of colic. In nearly all of A. J. Oschner's cases the patient had a diagnosis of dyspepsia and other stomach troubles, and had been treated long and vigorously for such ailments without success. The so-called neuralgia of the stomach and the cases diagnosed spasm of the stomach are usually unrecognized cholecystitis or gall-stones. Nausea is apt to be the symptom most complained of when the stone lies quietly within the gall-bladder without including the ducts.

Mucous colitis is frequently caused by gall-stones. The case usually complains of constipation; sometimes they say that the color of the stool varies from time to time, being sometimes clay colored, at others natural. The digestion of fats is seriously interfered with, if the bile be excluded from the duodenum, either by swelling of the mucous membrane of the common duct or by occlusion of the duct with a stone, or by exclusion of the hepatic duct. When bile is excluded from the intestines only about 4 per cent of the fats taken in are absorbed. The amount normally absorbed is about 90 per cent. Miller says that when the duct is excluded about 60 to 80 per cent escapes absorption. The clay colored stools are caused, partly from the absence of bile pigment and partly by the large amount of unabsorbed fat present in the feces. Lack of fat absorption is explained, because normally an emulsion is formed by the bile with the fat ingested, and secondly the action of the bile upon the fats accelerates the fat splitting of the pancreatic enzymes. It has been demonstrat-

ed that the cholates are capable of holding in solution large quantities of the fatty acids. Gall-stones in the fæces are seldom present to make a diagnosis on, for several reasons; first the gall-stone, unless it is coated with cholesterine, is very apt to be dissolved in the intestines and secondly they are frequently passed unnoticed. In order to detect them in the stools the patient must pass all the stools through a rather fine meshed sieve. I have found that these patients frequently suffer from piles, which may have several causes. The liver engorgement may cause an increase in the pressure of the portal circulation, and the constipation favors their presence. Obstruction of the bowel may take place from a calculus lodged within the intestine.

Gall-stones may by reflex action cause a spasm of the pulmonary capillaries, also reflex cough occurs.

A symptom of the paroxysm is concentrated, scanty urine. If there is occlusion of the ducts, the urine becomes colored a greenish brown color from the bile pigment in the blood which is excreted by the kidneys.

Glycosuria or albuminurea are not infrequent. The blood shows a leucocytosis and a septic factor.

There are certain common complications. The first which we ought to mention is appendicitis. Ochsner found acute or chronic appendicitis in 35 per cent of his cases. So that, in any operation on the gall-bladder, the appendix should be sought out and, if at all suspicious, removed. It is a problem whether these cases of appendicitis are simple primary infection or whether the cholecystitis is secondary to the appendicitis.

At operation, the glands along the

lower corner of the stomach are always found enlarged, and it is generally conceded that gastric ulcer is of common occurrence, caused by the presence of an infectious process near at hand in the gall-bladder.

Gall-stones may give rise to ulceration and perforation of the gall-bladder and to septic peritonitis. They cause cancer of the gall-bladder, cancer of the liver and cancer of the stomach and cancer of the pancreas. Wm. J. Mayo says that 7 per cent of all cases operated upon with stones in the gall-bladder have had pancreatitis in some form, and that 27 per cent of the cases with stone in the common duct have marked pancreatitis. He says that the presence of the gall-bladder is important in the prevention of pancreatitis and that this is a strong argument against its unnecessary removal, as advocated by Johnson and others in preference to draining it. In 492 cases there were serious complications involving the liver, duodenum, transverse colon and other organs, and cancer was found associated with the gall-stones in 85 cases. Considering these important facts Mayo warmly advocates early surgery as a prophylactic measure before there are any gross complications and at a time when the mortality is almost nil, to waiting for the disease later, where a large incision is necessary, with a consequent danger of ventral hernia when removal of the gall-bladder is unnecessary and before it becomes necessary to open the common duct, all of which operations vastly increase the mortality.

The presence of an infected gall-bladder may lead to a septic infection of the liver. Very frequently we find a tumor mass in the right hypochon-

drium, which may be the enlarged gall-bladder or an artificial lobe of the liver, known as Riedel's lobe, which seems to be pathognomonic of gall-stone.

The cardinal points in diagnosis, seem to be a history of enteric fever or prolonged digestive disturbances with what the patient describes as bilious attacks, a history of dull or sharp pains, extending from the epigastrium, about the level of the 10th rib, to a point near the spine or upwards into the right shoulder blade; presence of Riedel's lobe, tenderness over the gall-bladder on Murphy's deep grip palpation of the right hypochondrium, smart pain upon Murphy's hammer stroke percussion of the gall-bladder region and usually tenderness on forcible palpation of the gall-bladder region during deep inspiration; resistance and rigidity of the right rectus muscle in the right upper quadrant of the abdomen; usually a tinge of yellow, especially in the sclerotics; the finding of gall-stones in the stools after a paroxysm (this should only be expected in a few cases and should not be waited for, to make the positive diagnosis); the presence of an enlarged gall-bladder in the hypochondrium; the fact that sometimes the stools are clay colored; the presence of bile pigment in the urine; slight increase in the liver dullness, found best by palpation.

As regards the X-ray pictures, they should be taken with the patient flat on his abdomen, with three pillows beneath the clavicles, as this elevation permits protrusion of the gall-bladder, thus bringing the calculi nearer the photographic plane. The approximation is increased by making a pencil mark, on the back, corresponding to the site of the gall-bladder in front.

The tubes should be on the border line between soft and medium hardness. Failure to get a picture of gall-stones is not necessarily proof that they do not exist, as it is much more difficult to get gall-stones to show in a picture than it is to get kidney or bladder stones; and a negative X-ray picture of the gall-bladder has not nearly the same weight as a negative X-ray in renal colic.

CASE I.—Mrs. J., E., referred to me by Dr. Stone of Cuervo. H. W. 36 years of age, residence Cuervo, N. M.

Complaint: Trouble began according to her about a month ago, viz., about the 17th of February she did not have her menstrual period and has not had it yet. She thinks the reason for this was an illness of la grippe which she had shortly before. She has pain in both hypochondria which began about Feb. 13th a month ago; but had no severe pain until a week ago last Thursday when she began to have chills and then had severe pain in the small of the back mostly on the right side. This pain became very severe and was relieved with morphine. She suffered about an hour and then the pain gradually wore away but commenced again last Saturday week and she subsequently suffered from nausea and vomiting. She has had similar pains before.

Her father suffers from attacks of colic, her mother died with T-B and one brother died from diphtheria. She has had all the diseases of childhood. Never has had enteric fever. She is a small and not very well nourished woman. Appetite good but has a bad taste in the mouth and tongue has a thick brownish coating. She has had sour stomach for a long time. She

drinks coffee only in the morning. She had blood in the stools Sunday and has had piles for 14 years. She urinates about three to four times a day and when she has these attacks of pain the bladder is voided very frequently and the amounts vary, being both large and small. She has never passed any blood in the urine nor gravel, nor matter; although these pains radiate from the region of the right kidney to the groin. Menstruation began at 15 years, and she has flowed once in 28 days for 4 to 5 days. There are 5 children, the youngest 5 years old, and she has had two miscarriages, the last one two years ago. She has been lacerated. She never has had any trouble with the bladder or frequency of micturition except at these attacks or when pregnant.

There is tenderness over McBurney's point and also tenderness on hammer percussion and deep grip palpation of the gall-bladder. The spleen is enlarged probably from an old malaria. There is a systolic murmur over the heart heard best at the apex and the heart heard best at the apex and the 2nd aortic accentuated. The lower limbs are slightly oedematous. There is a profuse leucorrhoea and both the perineum and cervix are lacerated and there is a tumor about the size of a hen's egg in the right labium probably a fiboid. I think she is pregnant.

Urinary findings: dark amber in color, acid, S. G. 1030 with a faint trace of albumen and hyaline casts, granular casts and pus cells. The cystoscope shows the bladder healthy and ureteral catheterization demonstrated no stone, no hydronephrosis. Capacity left pelvis 5 cc. and the right 8 cc.

Diagnosis: Cholecystitis, gall-stones

and appendicitis, lacerated perineum, lacerated cervix, tumor of right labium, chronic nephritis (interstitial) mitral regurgitation.

Operation, appendectomy, removal of 404 stones from the gall-bladder and drainage of the gall-bladder. Diet for ulcer of the stomach.

CASE II.—Miss O. B., student, 16 years old, of Kaw, Okla., referred to me by Dr. John Widney.

Complaint: Pain just to the right of the epigastrium, which has been present since February 1st and this is the 8th. In November of last year she had two similar attacks, but they were not severe. They only commenced to get severe last December. The pain begins as a dull pain and gradually gets worse. It is then felt in the right shoulder and then she becomes sick at her stomach. The vomit is bilious and very sour. She belches burning fluid. The attacks of pain come on sometimes directly after a meal and sometimes not for several hours and sometimes not until 3 or 4 in the morning. She has vomited dark brown fluid once. She is well between the attacks. The bowels are constipated.

Her mother has had symptoms such as the daughter has and has had enteric fever. Otherwise the family history is negative, with the exception of the father's father who died from T-B.

The patient has had mumps, measles, small pox, chicken pox, hay fever and adenoids.

She cannot retain anything on the stomach and has a brownish coat on the tongue. Her temperature is 101 degrees, and the pulse varies from 120 to 130. The chest is negative.

There is tenderness over the right

lower quadrant of the abdomen in the neighborhood of the appendix, and also pain from pressure, on deep inspiration, with the fingers over the gall-bladder region; there is pain on hammer percussion and deep grip palpation of the gall-bladder.

Leucocytosis is 11000 and a septic factor, there being 80 per cent of polymorphonuclears and no eosinophiles.

Diagnosis: Cholecystitis, appendicitis, ulcer of the stomach, probable gall-stones.

Operation high right rectus incision, appendectomy, cholecystostomy. There were 13 stones found, three of which were in the cystic duct.

Dietary treatment for the gastric ulcer, complete recovery.

CASE III.—Mrs T. T., H. W. age 20 years, Guthrie, Okla., referred to me by Dr. Cotteral July 10th, 1910.

Complains of a misery across the upper abdomen, which is thought to be because of a tumor of the intestines. This misery is mostly in the right hypochondrium and consists of a dull ache all the time, and every day since last Friday; she has severe pain once daily of a cramping nature, and this has been bad now about 14 days.

Family history negative and the only disease the patient has had was mumps.

She thinks that she has lost 15 lbs. in the last month. The tongue is fairly clean and she has no appetite. She thinks the spells of pain come on about 2 hours after meals, eating does not make the pain worse, and she says that she vomited a greenish fluid 14 days ago, after which time she vomited after each meal for a week. 2 weeks ago she suffered from diarrhoea and does not suffer from constipation.

She has had nocturnal micturation

since childhood and passes a large quantity of urine.

Menstruation began at the age of 14 and has been regular 28 day type and she flows 3 to 4 days. She has 3 children, no miscarriages and no forceps used. Chest negative.

There is a tumor growth in the region of the gall-bladder, which is tender to the touch and quite resistant. It seems to be rounded and rather smooth. On questioning she says this side was injured a few years ago.

No leucocytosis or septic factor present.

Diagnosis: Probable sarcoma of the gall-bladder.

Operation: high right rectus incision which was enlarged by an oblique cut from the upper extremity toward the median line. I found a very large sarcoma involving all the gall-bladder and extending to the liver. It seemed to be almost a mass of aneurism vessels. The wound was sewed up and the woman left the hospital in two weeks. I think that if I had such a case again I should try to ligate the cystic artery.

CASE IV.—Mr. A. M. H. male, unmarried, 36 years old, Navina, Okla., March 3, 1910, referred to me by Dr. J. B. Wachtel.

Complaint: Nothing digests, he has pains in his spine and pains all through the abdomen, especially in the epigastrium. He has epistaxis, hot flashes and bleeding from the mouth.

The man is emaciated and jaundiced. The tongue is cracked, dry and coated with a brown coat. There has been vomiting after meals for the last two weeks and he has been troubled with fullness in the stomach after meals. Gas is belched after meals.

He says he has been badly constipated and suffers with piles.

His father was poisoned and his mother died from dropsy, said to be due to heart disease and to an abscess of the kidneys, and says that one brother died from bronchitis and malaria, but this was undoubtedly T-B.

He has had measles, mumps, chicken pox and ague. Last spring he had what he thought was rheumatism. It started in his left side and migrated to the heart region. Last November his eye swelled up and ran water and matter and he suffered pain in the occiput, and was ill three weeks, when the swelling left; but he is now blind in this eye. He states that the enlargement of his abdomen commenced at that time and he had to stop eating, and at the present time he has not eaten solid food for 5 weeks. Marked jaundice of the entire body is present and there are petechiae in the skin of the face, abdomen, scrotum and penis. Pulse 100, temp. 98.4. There is a huge tumor mass extending into the right pelvis below and up under both the right and left hypochondrium above. The left edge shows two distinct notches and some nodules. The diagnosis was carcinoma of the liver. The P. M. showed the tumor mass to be the enlarged liver with a notch for both the gall-bladder and for the falciform ligament. The pathologist report by Dr. Melvin is as follows:

"Path. No. 125, A. M. H. Post-mortem; liver.

Tissue sent to laboratory, cuts from both lobes; greenish color, dark areas present, probably due to hemorrhage. Examined in formalin, hence nothing could be noted as to consistency or cellularity.

Micros. Description: Blocks taken from both lobes, mounted in celloidin.

Sections examined showed decided carcinoma, medullary type. Identity of organ completely obscured by mass of cancer cells; now and then an outline of a lobule suggested. Connective tissue very scant; hemorrhagic areas plentifully scattered thruout section. Individual cells irregular, deep staining nuclei, abundant cytoplasm."

The medical treatment of gall-stone colic, at the time of acute exacerbation, is to wash out the stomach and put it at rest by giving nothing at all by mouth. Murphy's continuous proctoclysis supplies the patient with water. If it is deemed necessary, rectal feeding may be instituted. This treatment usually succeeds better than morphine. Except for the exacerbation, there should be no medical treatment of gall-stones. Olive oil will not cause them to disappear, neither will sodium succinate. I strongly urge the general practitioner not to fritter away valuable time on either this treatment nor probilin pills, etc.; but to refer him or her to the surgeon to whose table she will eventually find their way anyway, in time before the complications, I have mentioned, occur. Send him or her to the surgeon before they have made the rounds and at a time when they will return to their doctor with a good word for medicine and surgery and no "knock." I would urge that there be fewer exploratory operations before every other means has been exhausted to make a correct diagnosis. In operating for gall-stones see that there is no obstruction of the passages remaining, either from adhesions, undiscovered stones or strictures resulting from old ulcerations. Do not

think that operation alone cures the patient, in many there are gastric or duodenal ulcers and other complications which must receive appropriate treatment before a complete recovery takes place.

In writing this paper free use has

been made of the writings of Osler, Holt, Edwards, Adami, American Text Book of Surgery, Murphy, Billings, Carl Beck, Krehl, A. J. Ochsner, McDonald, Johnson, Anders, Keen, Wyllis Andrews, Fothergill and J. W. Legg.

TWO CASES OF FALSE

HERMAPHRODITISM

Dr. A. C. Bebasioff reports two cases of this character in *Chirurgiech-sky Archiv Veliaminova*. In the first case it concerned a child taken for a girl at birth, but having shown, upon growing, masculine tendencies. The external genital organs are those of a woman, but in the left labium a testicle is felt and the habitus is masculine. At eleven years there appeared on the right side of the abdomen a painful tumor which, at first, was taken for an inguinal hernia. An operation for its radical cure was made, but micro-

scopic examination of the excised tumor showed it to be a uterus.

The second case concerned a subject of medium age with the marked characteristics of an adult man, married, and having children of which the oldest resembles his father very much. On account of a painful tumor at the lower part of the abdomen, surgical intervention was made and the tumor, of the size of a fist in an adult, was removed. It was a uterus, provided with Fallopian tubes undergoing cancerous degeneration. The external genital organs had the masculine type. —American Journal of Dermatology.

THE SIGNIFICANCE OF LEUCOCYTOSIS IN SURGERY

J. S. MASON, M. D., ALBUQUERQUE, N. M.

Read Before the Thirtieth Annual Session of the New Mexico Medical Society, East Las Vegas, N. M., September 6-9th, 1911.

In placing my paper before this Society, I have endeavored not only to give you an understanding of the significance of leucocytosis in surgery, but to make it as concise as possible.

The role played by the leucocytes is important in many ways.

(a) From a diagnostic point of view. (1) In enabling one to differentiate between nervous, mental, and inflammatory conditions. (2) Between different inflammatory conditions. (3) Between acute, sub-acute, and chronic inflammatory conditions. (4) Between pus and simple inflammatory conditions.

(b) From a prognostic standpoint, in acute, sub-acute and chronic inflammatory conditions.

(c) By determining the severity of the inflammation, the extensiveness of the invasion, and lastly the resistance of the host to the invading organism.

We will now consider the leucocytes as they appear in normal blood, and their percentages.

Poly's	64%	Neutral
Large Mono's	28%	Basic
Small Mono's	1%	Basic
Transitional	1%	Basic
Eosinophiles	1%	Acid

As to their morphology, suffice to say that they can be readily distin-

guished by their different affinities for the aniline dyes.

Two counts are used to determine the role played by the leucocytes, one the differential count; the other the total count regardless of differentiation. By the differential we mean to say counting the percentage of all the cells.

The total count is made regardless of percentages.

The differential count requiring at least one hour to perform is not practicable and therefore had best be left to the hospitals. The total count is the one to which I will adhere in the remarks that are to follow.

TECHNIQUE FOR OBTAINING BLOOD FOR THE COUNT.

Blood is best obtained from the lobe of the ear, which after being thoroughly cleansed with alcohol and wiped dry with a piece of gauze, is punctured with any sharp instrument.

The blood is allowed to well up without pressure, the first drop or two wiped off.

With a special pipette used for this purpose, and graduated so that the dilution made is 1-20, the blood is drawn up to the .05 mark exactly, the end wiped clean. It is then immersed in a staining fluid consisting of the following:

Acetic acid1.0 cc.
 Gentian Violet..... ..0.5 cc.
 Aqua Dest.100. cc.

This should be drawn up to the graduation marked II. The whole is thoroughly shaken.

This solution stains the nuclei of the leucocytes a faint violet while the protoplasm appears dark; the red cells becoming laked.

The blood now being in a dilution of 1-20 is placed upon the counter and counted as such.

TECHNIQUE OF COUNTING.

The counter used is the *Thoma-Zeiss Hemo-cytometer* which consists of a specially ground glass containing counting chamber and specially ground cover glass.

The counting chamber is made of an outer flat ring of glass separated by a circular trench from a central platform, firmly cemented to a glass slide.

The outer ring is 1-10 mm. higher than the central platform, so that the cover glass resting flat upon the outer ring will be separated from the inner ring by 1-10 mm.

The center of the platform is ruled into minute squares, each side of which measures 1-20 mm., the cubic space over each small square between the platform below and the coverslip above is therefore 1-20 x 1-20 x 1-10 cubic mm. As a rule the small squares are ruled in sets of sixteen by double rulings at intervals.

Such sets of sixteen small squares are termed big squares.

After having diluted the blood with the specified solution and shaken, get rid of the first drop or two, and the third or part of the third is dropped upon the counting chamber, care being

taken to avoid air bubbles. If these appear wipe off the chamber and proceed with another drop. This being done the chamber is then covered with the cover slip. If the fluid runs off the center ring into the trench too big a drop has been taken. When covered the drop should extend just to the margin of the platform, but not over.

Now focus with the 1-6 in. lens and enumerate the cells in each of the sixteen small squares which make up one large square. In normal blood there should not be over a total of three leucocytes to each large square, the normal being between 6,000 and 8,000 per cu. mm. The daily variation in healthy individuals may be from 4,000 to 15,000 at different periods of the day. After each counting the pipette should be cleansed with, 1. acetic acid; 2. alcohol, 3. ether, and it is best they should be close at hand.

Importance of counting lies in the early stages and the repeated counting of the same individual's blood.

Bear in mind that a leucocytosis of 18,000 often accompanies a deep seated suppuration and may afford valuable information in diagnosis. Absence of leucocytes does not, however, exclude suppuration. A leucocytosis which steadily increases at successive counts is indicative of a progressive pus formation and therefore strictly in favor of immediate operation.

In many cases of pyrexia, simulating typhoid or malaria, a leucocytosis of 20,000 has revealed a deep seated suppuration, such as hepatic, appendiceal or even abscess of the tubes.

Tuberculosis does not give a leucocytosis unless secondarily infected.

Gangrene and osteomyelitis both produce a marked leucocytosis.

NOSE AND THROAT.

Surgical conditions producing leucocytosis may be tabulated, viz.:

Abscess—circumtonsillar.

- " —acute glanders of the pharynx.
- " —of septum.
- " —faucial tonsil.
- " —orbital secondary to accessory sinuses.
- " —retropharyngeal.
- " —formation in cryptic tonsil.

EAR.

Acute suppurative otitis media, suppurative mastoiditis, both cause marked leucocytosis, but those due to t. b. and syphilis are important.

It is important to note that any condition (inflammatory or otherwise) of the thyroid produces a leucocytosis out of all proportion to the severity of the inflammation. To demonstrate: A case reported by Kyle on Nose and Throat shows 85,000.

CHEST AND LUNGS.

Inflammations of serous membranes, pleura and pericardium both produce a leucocytosis, also empyema.

ABDOMEN.

Stomach:— Carcinoma produces from 12,000 to 20,000, and may enable a differential diagnosis between ulcer and carcinoma, or carcinoma and acute indigestion.

Chronic gastro-intestinal disturbances produce no leucocytosis as a rule.

LIVER AND GALL BLADDER.

Leucocytosis is relatively low in amœbic abscess, 12,000 to 14,000.

Leucocytosis may be of value in determining whether the gall-bladder is septic or non-septic and also in determining the severity of the inflammation. Gall-stones when present and

unaccompanied by infection, produce slight, if any, leucocytosis. But all infectious processes of the liver and gall-bladder, as cholangitis, cholecystitis, abscess, thrombosis and infection produce a leucocytosis.

PANCREAS.

Acute and hemorrhagic forms of pancreatitis produce a fair leucocytosis and this will help to distinguish them from the ordinary pains of acute indigestion, but chronic pancreatitis shows no such change.

URINARY SYSTEM.

All infections cause a leucocytosis, and this is a distinguishing feature in insisting upon operation when associated with calculus or obstruction, and in detecting and differentiating between malignancy and hysteria.

MALIGNANCY.

Leucocytosis depends upon the following conditions:

1. Position of the growth.

Tumors of the cardia and esophagus show little increase, but when there is an increase they should be sought for elsewhere. Cancer of the stomach, uterus or rectum shows high leucocytosis, especially if there be hemorrhage. Malignancy of thyroid, kidney or pancreas show high leucocytosis.

2. Size.

Tumor of parenchymatous tissues and viscera show greater leucocytosis than those of scirrus and epitheliomatous varieties. For example; cancer of skin, lip, scirrus of the breast, cause less leucocytosis than those of the kidneys, uterus and rectum.

ACUTE AND CHRONIC PELVIC CONDITIONS.

These cause the same leucocytosis as

in appendicitis, and only serve in determining septic from non-septic conditions.

APPENDICITIS.

In appendicitis leucocytosis affords valuable information, both as a diagnostic and a prognostic factor. The count should be made in the early stages and at regular intervals—every hour—and should also be compared with the general symptoms and condition of the patient. As in all infections there is no leucocytosis if the condition be either mild or non-septic. This we must bear in mind.

The catharral form is rarely accompanied by a leucocytosis, an increase of from 12,000 to 14,000 being the rare exception.

An increasing leucocytosis in a patient suffering from the symptom complex of appendicitis is the strongest evidence of a spreading infection. Care should be taken to make a count at regular intervals and should under no circumstances be disregarded.

In regard to a low count, 8,000 to 12,000, this may mean one of several things, viz.:

1. A mild case.
2. A severe case in which the resistance of the patient is low.
3. A thoroughly walled off abscess.

After an abscess has been walled off the leucocytosis generally remains at a constant after the initial fall, due to the decrease in absorption of the toxins. Any sudden rise in the leucocyte count means a ruptured wall and diffuse peritonitis. In the majority of abscesses which are not walled off completely the leucocyte count is generally fluctuating, and when the count increases slowly but steadily the condi-

tion is usually increasing in relative proportionate severity.

When a leucocytosis remains at a constant of 18,000 to 20,000 we may be relatively certain that a large abscess has formed.

SIZE OF LEUCOCYTOSIS.

1. Catarrhal, usually 8,000 to 12,000.
2. Acute diffusion from 12,000 to 22,000.
3. Gangrenous appendix, 20,000 to 30,000, or more, and at any time when pus distends the appendix the leucocyte count will be high, 20,000 to 30,000.

DIFFERENTIAL DIAGNOSIS.

The leucocyte count is useful in differentiating any of the following conditions from appendicitis:

1. Intestinal colic and crises of locomotor ataxia.
2. Impaction of feces.
3. Gall-stone colic, renal colic, if no infection be a complication.
4. Ovarian and pelvic neuralgic pains.
5. Floating kidney.
6. Extrauterine pregnancy— but extrauterine pregnancy does cause a leucocytosis as an exception to the rule.

INTESTINAL OBSTRUCTION.

The leucocyte count is of marked value—within a few hours the count rises rapidly. If obstruction is partial the count does not, as a rule, exceed 16,000 and ranges usually between 14,000 and 16,000. If obstruction is complete the count rises still higher—20,000 or more.

Remember the higher the count the shorter the duration, and the more probable the danger of gangrene. If a count rises in 24 hours above 24,000, gangrene is surely present.

When gangrene or peritonitis is present, the count rapidly falls; if not present the count remains high until either 3rd or 4th day. As to prognosis in this condition, I may say that if a leucocyte count of over 20,000 be present on the 3rd or 4th day the progression may be considered favorable, and *vice versa*.

If the count be below 15,000 or even 16,000 on the 3rd day the prognosis is grave. For by then the fatal auto-intoxication has set in and the patient has no resistance left to combat the invasion.

Bear in mind that at any time a distinct leucocytosis occurs in the early stages of any acute inflammatory condition, then is the time and the only time for immediate surgical interference.

In a closing word I may say that surgery today depends not altogether upon the ability of a surgeon to operate but on his ability to read the characteristic leucocyte chart that every surgical case carries.

REFERENCES.

International Clinics, Vol. I, Series 18; Vol. I, Series 19; Vol. IV, Series 19.

Surgical Diagnosis, Johnson; Vols. 1, 2 and 3.

Surgical Diagnosis, Eisendrath.

Practical Medical Series, Murphy, Vols. 2—1908-'09-'10.

Albutt's System of Gynecology.

Gynecology and Abdominal Surgery, Kelly; Noble.

Treatise on Surgery, Fowler.

The Appendix and its Diseases, Kelly; Hurnden.

THE SURGERY OF COLONIC CONSTIPATION.

A Report of Thirteen Cases by Louis J. Hirschman, M. D., of Detroit, Mich.

After presenting the histories, radiographs and reports of operative treatment of thirteen cases of obstipation due to colonic obstruction, dilatation, stricture and adhesions, Dr. Hirschman has formulated several principles in dealing with his cases requiring colonic surgery. They are epitomized in the following conclusions:

1. Most cases of chronic constipation are colonic in origin and many are obstructive in type.

2. Many cases of so-called chronic constipation are therefore really colonic obstipation.

3. Many cases of colonic obstipation suffer from dilatation of the colon with or without ptosis.

4. Radiography is a most vital necessity in the diagnosis of all cases of chronic interference with bowel function. Its negative value may be greater than its positive.

5. A chronically, over-distended colon whether adherent or not, never again becomes a normally functioning bowel.

6. Intestinal adhesions usually tend to recur in increased intensity and adhesions only cause symptoms when put under stress or tension.

7. The prevention of tension in physiological rest to the affected organ and colonic rest is only obtained by colectomy, colostomy, or exclusion.

8. Colectomy as advocated by Lane is an operation seldom advisable and has many obvious objections from the

standpoint of patient and physician. It is too grave a procedure to be undertaken except in the most aggravated cases.

9. Strictures, neoplasms, and other obstructions should be removed by excision of the diseased tissue and lateral anastomosis of the bowel.

10. Exclusion by ileo-colostomy is safe, easy to perform, and most satisfactory in the restoration of normal peristalsis and consequently normal health.

11. Results speak more eloquently than words. After an experience with nearly fifty cases requiring exclusion or resection of the colon for obstructive constipation with but one failure, I feel fully justified in recommending it to your careful consideration in all cases of aggravated colonic obstipation whether congenital, post-operative, or dependent on some mechanical obstruction or narrowing of the bowel.

(Abstract of a paper read before the American Proctologic Society.)

Observations Upon the Relationship of Tuberculosis to Peri-Rectal Suppurations. By Collier F. Martin, M. D., Philadelphia, Pa.

The author has found pulmonary tuberculosis so frequently associated with his cases of peri-rectal suppuration that he determined to report a consecutive series of cases, with findings.

The report comprises 376 consecutive cases, 75 per cent being males, and ranging in age from 7 months to 87 years. The majority of these cases (322) occurred in the most active period of life, from 20 to 60 years.

He divided his cases into four major groups: the actively tubercular (144 cases), the chronically tubercular (68

cases), the phthisenoid (20 cases), and those patients in apparently good health (55 cases). This would indicate that at least 212 cases or 61 per cent were cases of known tuberculosis.

There were 309 operations performed on 306 patients, under various anesthetics: spinal anesthesia 145 times, ether 54 times, and local and other anesthetics on the remaining. He chose spinal anesthesia where no other preference was expressed by the patient or the attending physician, on account of the associated tuberculosis.

Following these cases for the past four years he has traced thirty-seven deaths, of which thirty-four died of active tuberculosis or its complications.

The abscesses or fistulae in most of these cases could not be classified, from their appearance, as being locally tuberculous. Where the tubercle bacillus was easily recovered from the tissues or discharges, there was usually a very active pulmonary infection present.

The writer believes that the usual explanation of the association of pulmonary tuberculosis with rectal suppurations, lies in the fact that any pulmonary lesion, however small or inactive, may so alter the patient's vital processes and so lower the opsonic index, to pyogenic invasion. The same may be said of pyogenic invasions in genito pyrogenic invasion. The same may be said of pyrogenic infections in general, but the peculiar anatomic conditions existing in the rectum and its very active physiologic function, makes this a fertile region for external and internal trauma with subsequent inflammation and infection.

Traumatism is considered to be the chief active factor in impairing the integrity of the tissues.

The writer emphasized the fact that a careful lung examination should be made in all cases of peri-rectal suppuration. He also made a strong plea for a careful and extended supervision of the patient's general health for a long period after all surgical treatment had been discontinued.

The vital consideration in these cases

is not the question as to whether or not the local lesion is tuberculous, but has to do with the presence of active or latent tuberculosis in the patient, and his chances of having good general health after surgical intervention.

(Abstract of a paper read before the American Proctologic Association.)

BOOK REVIEW

Arteriosclerosis. Etiology, Pathology, Diagnosis, Prognosis, Prophylaxis and Treatment, with a Special Chapter on Blood Pressure.

By Louis M. Warfield, A. B., M. D., Assistant Superintendent and Resident Physician to Milwaukee County Hospital; Assistant Professor of Medicine, Wisconsin College of Physicians and Surgeons, etc., with an introduction by W. S. Thayer, M. D., Professor of Clinical Medicine, Johns Hopkins University. St. Louis, Mo., C. V. Mosby Company, \$2.50.

This is the second edition of Dr. Warfield's book, the first having been has been revised and two chapters have been re-written. Two new chapters have been added, one on the Physical Examination of the Heart and Arteries, and the other on Arterio-Sclerosis in its relation to Life Insurance. The chapter on Blood Pressure has been wholly re-written and the advanced views taken cognizance of. The new edition bids fair to receive as warm a welcome as did the first edition.

The Surgical Clinics of John B. Murphy, M. D., at Mercy Hospital, Chicago. Volume I, Number IV., (August). Octavo of 154 pages, illus-

trated. Philadelphia and London: W. B. Saunders Company, 1912. Published bi-monthly. Price per year: Paper, \$8.00; Cloth, \$12.00.

Murphy's Clinics improve with each issue. The August number gives many points of practical value in diagnosis and treatment. In this number we find:

Appendicitis (Chronic and Acute).

Ankylosis of the Knee; Arthroplasty; Joint Infections.

Angiophlebitis of Interior of Leg and Thigh—Old Muscular Hemangioma.

Hypertrophy of the Prostate.

Nephropyloplasty.

Ankylosis of the Left Elbow Joint—Fracture of Joint with Deformity.

Tumor of the Abdomen—Retro-peritoneal sarcoma.

Concussion of the Spine with Impacted Fracture of the Vertebrae.

Traumatic Epilepsy; Decompression.

Osteitis Fibrosa Cysticus (Transplantation of Bone).

Carcinoma of the Lip.

Carcinoma of the Splenic Flexure of the Colon—Intestinal Obstruction. Student's Clinic—Fractures.

Issued serially, one number every

other month (six numbers a year), each number about 150 octavo pages, illustrated. Per year: \$8.00; in Cloth, \$12.00 net. Sold only by calendar year.

Collected Papers by the Staff of St. Mary's Hospital (Moyo Clinic) 1911.

Octavo of 603 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1912. Cloth, \$5.50 net.

The results obtained in the Mayo clinic are eagerly watched by the profession, and the collected papers are matters of interest to all scientific physicians. This latest volume has much of value to commend its careful reading to the medical man.

The illustrations in this number are particularly clear and add value to the text.

Sexual Impotence. By Victor G. Vecki, M. D., Consulting Genito-Urinary Surgeon to the Mount Zion Hospital, San Francisco. Fourth edition, enlarged. 12mo. of 394 pages. W. B. Saunders Company, Philadelphia and London. Cloth, \$2.25 net.

This fourth edition of Vecki's book brings the subject matter up to date. The important gains in etiology are noted while some modifications and additions are made in the chapters dealing with the treatment of sexual impotence.

To the student of this subject this last edition will be of much use and interest.

Infant Feeding. By Clifford G. Grulee, A. M., M. D., Assistant Professor of Pediatrics at Rush Medical College, Attending Pediatrician to Cook County Hospital. Octavo of 295 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1912. Cloth, \$3.00 net.

This practical work is based on a course of lectures given to the students of Rush Medical College.

The author has drawn largely from German authors and expresses the views held by Continental physicians.

He has placed the subject matter under four headings: Fundamental Principles of Infants' Nutrition; Nourishment of the Infant on the Breast; Artificial Feeding; Nutrition in Other Conditions.

The New Mexico Medical Journal

PUBLISHED MONTHLY BY COUNCIL OF THE NEW MEXICO MEDICAL SOCIETY

R. E. MCBRIDE, M. D., MANAGING EDITOR - - - Las Cruces, New Mexico

Annual Subscription \$2.00. For Members, \$1.00. Single Copies 25 Cents

Entered as second class matter December 10, 1910, at the postoffice at
Las Cruces, N. M., under the act of March 3, 1879

All communications to this publication must be made to it exclusively. It will be more satisfactory to all concerned if contributions are typewritten.

Secretaries of county societies are earnestly requested to report their meetings, including the subject matter of the papers presented and the substance of the discussions.

Marked copies of local newspapers, or clippings containing matters of interest to the profession will be gratefully acknowledged. The name of the sender should be given.

Books for review should be sent to Managing Editor.

Advertisements of proprietary medicines will be accepted provided the preparations advertised have been approved by the Council on Pharmacy A. M. A., or give the formula in the advertisement. Address all communications to

New Mexico Medical Journal, P. O. Box 23, Las Cruces, N. M.

VOL. VIII

APRIL 1912

NO. 1

CONTENTS

Page

Editorial	215
Catholic Doctrine on "Interruption of Pregnancy"	223
Treatment of Pelvic Inflammation	227
Practical Points in Railway Surgery	231
Enlarged Tonsils and How They Should be Removed	235
Book Review	238

New Mexico Medical Society

OFFICERS

President, R. L. Bradley	Roswell	
Vice-Presidents	{ L. S. Peters	Silver City
	{ M. F. Desmarais	Las Vegas
	{ J. J. Shuler,	Raton
Secretary, R. E. McBride	Las Cruces	
Treasurer, F. E. Tull	Albuquerque	
Council	{ S. D. Swope, Chairman	Deming
	{ E. B. Shaw	Las Vegas
	{ W. T. Joyner	Roswell



New Mexico Cottage Sanatorium Silver City, New Mexico

FOR THE TREATMENT OF TUBERCULOSIS

PHYSICIAN-IN-CHIEF
E. S. BULLOCK, M.D.

MANAGER
WAYNE McV. WILSON

SUMMER CLIMATE IDEAL

Beautiful situation in the mountains of southern New Mexico. Climatic conditions wonderfully perfect. Cool summers. Moderate winters. A flood

A CORNER OF FOUNDER'S COURT of sunshine at all seasons. Food excellent and abundant. All the milk our patients can consume from our own dairy of selected cows. Moderate charge. Institution partly endowed. Separate cottages for patients. Complete hospital building for febrile cases. Separate amusement pavilions for men and women. Physicians in constant attendance. Livery for use of patients. Well equipped laboratory, treatment rooms, etc. All forms of tuberculosis received. Special attention to laryngeal tuberculosis. Tuberculin administered in suitable cases. One of the largest and best equipped institutions for tuberculosis in America. Patients received only through physicians.

WRITE TO THE MANAGER FOR DESCRIPTIVE BOOKLET.

TEN POTENT REASONS WHY

WE CAN BEST SERVE YOUR BOOKS WANTS

BECAUSE---We carry the most comprehensive stock, new and second-hand, in America and can supply any book published.

Our exchange system solves the problem of maintaining your library in latest editions as books no longer needed are dead timber to you--we exchange the salable volumes for your present wants.

Send for our

CUT=PRICE LIST

Just issued--1912 Edition
Offering Exceptional Values

Our facilities for obtaining rare books are unexcelled. When you wish to read up on a special subject you can later exchange such books for others

more suited to your constant needs. Circulars sent you frequently on what is new. Our credit policy is generous. By trading with us you have but one account, as we handle books of all publishers, old or new. In fifteen years experience, we have acquired unrivaled facilities for intelligently serving the the medical profession. Write us now.

L. S. MATTHEWS & CO., MEDICAL BOOKS

3333 OLIVE STREET.

ST. LOUIS, MISSOURI

The New Mexico Medical Journal

PUBLISHED MONTHLY BY COUNCIL OF THE NEW MEXICO MEDICAL SOCIETY

R. E. MCBRIDE, M. D., MANAGING EDITOR - - - Las Cruces, New Mexico

Annual Subscription \$2.00. For Members, \$1.00. Single Copies 25 Cents

Entered as second class matter December 10, 1910, at the postoffice at
Las Cruces, N. M., under the act of March 3, 1879

All communications to this publication must be made to it exclusively. It will be more satisfactory to all concerned if contributions are typewritten.

Secretaries of county societies are earnestly requested to report their meetings, including the subject matter of the papers presented and the substance of the discussions.

Marked copies of local newspapers, or clippings containing matters of interest to the profession will be gratefully acknowledged. The name of the sender should be given.

Books for review should be sent to Managing Editor.

Advertisements of proprietary medicines will be accepted provided the preparations advertised have been approved by the Council on Pharmacy A. M. A., or give the formula in the advertisement. Address all communications to

New Mexico Medical Journal, P. O. Box 23, Las Cruces, N. M.

VOL. VIII

MAY 1912

NO. 2

CONTENTS

Page

Editorial	239
Altitude and Blood Pressure	248
Trachoma	250
Comparison of Wassermann and Nagouchi Reactions	254
"606" and the Wassermann Reaction	260
Book Review	266

New Mexico Medical Society

OFFICERS

President, R. L. Bradley	Roswell	
Vice-Presidents	{ L. S. Peters	Silver City
	{ M. F. Desmarais	Las Vegas
	{ J. J. Shuler,	Raton
Secretary, R. E. McBride	Las Cruces	
Treasurer, F. E. Tull	Albuquerque	
Council	{ S. D. Swope, Chairman	Deming
	{ E. B. Shaw	Las Vegas
	{ W. T. Joyner	Roswell



New Mexico Cottage Sanatorium Silver City, New Mexico

FOR THE TREATMENT OF TUBERCULOSIS

PHYSICIAN-IN-CHIEF
E. S. BULLOCK, M.D.

MANAGER
WAYNE MCV. WILSON

SUMMER CLIMATE IDEAL

Beautiful situation in the mountains of southern New Mexico. Climatic conditions wonderfully perfect. Cool summers. Moderate winters. A flood

A CORNER OF FOUNDER'S COURT of sunshine at all seasons. Food excellent and abundant. All the milk our patients can consume from our own dairy of selected cows. Moderate charge. Institution partly endowed. Separate cottages for patients. Complete hospital building for febrile cases. Separate amusement pavilions for men and women. Physicians in constant attendance. Livery for use of patients. Well equipped laboratory, treatment rooms, etc. All forms of tuberculosis received. Special attention to laryngeal tuberculosis. Tuberculin administered in suitable cases. One of the largest and best equipped institutions for tuberculosis in America. Patients received only through physicians.

WRITE TO THE MANAGER FOR DESCRIPTIVE BOOKLET.

TEN POTENT REASONS WHY

WE CAN BEST SERVE YOUR BOOKS WANTS

BECAUSE---We carry the most comprehensive stock, new and second-hand, in America and can supply any book published. Our exchange system solves the problem of maintaining your library in latest editions as books no longer needed are dead timber to you--we exchange the salable volumes for your present wants.

Send for our

CUT=PRICE LIST

Just issued--1912 Edition
Offering Exceptional Values

Send titles and dates. Our facilities for obtaining rare books are unexcelled. When you wish to read up on a special subject you can later exchange such books for others

more suited to your constant needs. Circulars sent you frequently on what is new. Our credit policy is generous. By trading with us you have but one account, as we handle books of all publishers, old or new. In fifteen years experience, we have acquired unrivaled facilities for intelligently serving the the medical profession. Write us now.

L. S. MATTHEWS & CO., MEDICAL BOOKS

3333 OLIVE STREET.

ST. LOUIS, MISSOURI

The New Mexico Medical Journal

PUBLISHED MONTHLY BY COUNCIL OF THE NEW MEXICO MEDICAL SOCIETY

R. E. MCBRIDE, M. D., MANAGING EDITOR - - - Las Cruces, New Mexico

Annual Subscription \$2.00. For Members, \$1.00. Single Copies 25 Cents

Entered as second class matter December 10, 1910, at the postoffice at
Las Cruces, N. M., under the act of March 3, 1879

All communications to this publication must be made to it exclusively. It will be more satisfactory to all concerned if contributions are typewritten.

Secretaries of county societies are earnestly requested to report their meetings, including the subject matter of the papers presented and the substance of the discussions.

Marked copies of local newspapers, or clippings containing matters of interest to the profession will be gratefully acknowledged. The name of the sender should be given.

Books for review should be sent to Managing Editor.

Advertisements of proprietary medicines will be accepted provided the preparations advertised have been approved by the Council on Pharmacy A. M. A., or give the formula in the advertisement. Address all communications to

New Mexico Medical Journal, P. O. Box 23, Las Cruces, N. M.

VOL. VIII

JUNE 1912

NO. 3

CONTENTS

	Page
Editorial	271
"Preventive Medicine"	277
"Blood Pressure. A Miscellany"	282
"Chronic Diarrhoea".....	287
Miscellany	291
Book Review	295

New Mexico Medical Society

OFFICERS

President, R. L. Bradley	Roswell
Vice-Presidents {	
L. S. Peters	Silver City
M. F. Desmarais	Las Vegas
J. J. Shuler,	Raton
Secretary, R. E. McBride	Las Cruces
Treasurer, F. E. Tull	Albuquerque
Council {	
S. D. Swope, Chairman	Deming
E. B. Shaw	Las Vegas
W. T. Joyner	Roswell

New Mexico Cottage Sanatorium Silver City, New Mexico

FOR THE TREATMENT OF TUBERCULOSIS

PHYSICIAN-IN-CHIEF
E. S. BULLOCK, M.D.

MANAGER
WAYNE M^{RS}. V. WILSON

SUMMER CLIMATE IDEAL

Beautiful situation in the mountains of southern New Mexico. Climatic conditions wonderfully perfect. Cool summers. Moderate winters. A flood

A CORNER OF FOUNDER'S COURT of sunshine at all seasons. Food excellent and abundant. All the milk our patients can consume from our own dairy of selected cows. Moderate charge. Institution partly endowed. Separate cottages for patients. Complete hospital building for febrile cases. Separate amusement pavilions for men and women. Physicians in constant attendance. Livery for use of patients. Well equipped laboratory, treatment rooms, etc. All forms of tuberculosis received. Special attention to laryngeal tuberculosis. Tuberculin administered in suitable cases. One of the largest and best equipped institutions for tuberculosis in America. Patients received only through physicians.

WRITE TO THE MANAGER FOR DESCRIPTIVE BOOKLET.

TEN POTENT REASONS WHY

WE CAN BEST SERVE YOUR BOOKS WANTS

BECAUSE---We carry the most comprehensive stock, new and second-hand, in America and can supply any book published. Our exchange system solves the problem of maintaining your library in latest editions as books no longer needed are dead timber to you--we exchange the salable volumes for your present wants. Our facilities for obtaining rare books are unexcelled. When you wish to read up on a special subject you can later exchange such books for others

Send for our
**CUT=PRICE
LIST**
Just issued—1912 Edition
Offering Exceptional Values

more suited to your constant needs. Circulars sent you frequently on what is new. Our credit policy is generous. By trading with us you have but one account, as we handle books of all publishers, old or new. In fifteen years experience, we have acquired unrivaled facilities for intelligently serving the the medical profession. Write us now.

L. S. MATTHEWS & CO., MEDICAL BOOKS

3333 OLIVE STREET.

ST. LOUIS, MISSOURI

The New Mexico Medical Journal

PUBLISHED MONTHLY BY COUNCIL OF THE NEW MEXICO MEDICAL SOCIETY

R. E. McBRIDE, M. D., MANAGING EDITOR

Las Cruces, New Mexico

Annual Subscription \$2.00. For Members, \$1.00.

Single Copies 25 Cents

Entered as second class matter December 10, 1910, at the postoffice at
Las Cruces, N. M., under the act of March 3, 1879

All communications to this publication must be made to it exclusively. It will be more satisfactory to all concerned if contributions are typewritten.

Secretaries of county societies are earnestly requested to report their meetings, including the subject matter of the papers presented and the substance of the discussions.

Marked copies of local newspapers, or clippings containing matters of interest to the profession will be gratefully acknowledged. The name of the sender should be given.

Books for review should be sent to Managing Editor.

Advertisements of proprietary medicines will be accepted provided the preparations advertised have been approved by the Council on Pharmacy A. M. A., or give the formula in the advertisement. Address all communications to

New Mexico Medical Journal, P. O. Box 23, Las Cruces, N. M.

VOL. VIII

JULY, 1912

NO. 4

CONTENTS

Page

Editorial	297
Constitution and By-Laws	303
"The Relation of Psychology to Medicine"	313
"Arterial Pressure"	315
"The Common House Fly"	324
Book Review	328

New Mexico Medical Society

OFFICERS

President, R. L. Bradley	Roswell
Vice-Presidents { L. S. Peters	Silver City
{ M. F. Desmarais	Las Vegas
{ J. J. Shuler,	Raton
Secretary, R. E. McBride	Las Cruces
Treasurer, F. E. Tull	Albuquerque
Council { S. D. Swope, Chairman	Deming
{ E. B. Shaw	Las Vegas
{ W. T. Joyner	Roswell



New Mexico Cottage Sanatorium Silver City, New Mexico

FOR THE TREATMENT OF TUBERCULOSIS

PHYSICIAN-IN-CHIEF
E. S. BULLOCK, M.D.

MANAGER
WAYNE M^CV. WILSON

SUMMER CLIMATE IDEAL

Beautiful situation in the mountains of southern New Mexico. Climatic conditions wonderfully perfect. Cool summers. Moderate winters. A flood

A CORNER OF FOUNDER'S COURT of sunshine at all seasons. Food excellent and abundant. All the milk our patients can consume from our own dairy of selected cows. Moderate charge. Institution partly endowed. Separate cottages for patients. Complete hospital building for febrile cases. Separate amusement pavilions for men and women. Physicians in constant attendance. Livery for use of patients. Well equipped laboratory, treatment rooms, etc. All forms of tuberculosis received. Special attention to laryngeal tuberculosis. Tuberculin administered in suitable cases. One of the largest and best equipped institutions for tuberculosis in America. Patients received only through physicians.

WRITE TO THE MANAGER FOR DESCRIPTIVE BOOKLET.

TEN POTENT REASONS WHY

WE CAN BEST SERVE YOUR BOOKS WANTS.

BECAUSE---We carry the most comprehensive stock, new and second-hand, in America and can supply any book published. Our exchange system solves the problem of maintaining your library in latest editions as books no longer needed are dead timber to you--we exchange the salable volumes for your present wants.

Send for our
**CUT-PRICE
LIST**
Just issued—1912 Edition
Offering Exceptional Values

Send titles and dates. Our facilities for obtaining rare books are unexcelled. When you wish to read up on a special subject you can later exchange such books for others

more suited to your constant needs. Circulars sent you frequently on what is new. Our credit policy is generous. By trading with us you have but one account, as we handle books of all publishers, old or new. In fifteen years experience, we have acquired unrivaled facilities for intelligently serving the the medical profession. Write us now.

L. S. MATTHEWS & CO., MEDICAL BOOKS.

3333 OLIVE STREET.

ST. LOUIS, MISSOURI

The New Mexico Medical Journal

PUBLISHED MONTHLY BY COUNCIL OF THE NEW MEXICO MEDICAL SOCIETY

R. E. MCBRIDE, M. D., MANAGING EDITOR

Las Cruces, New Mexico

Annual Subscription \$2.00. For Members, \$1.00.

Single Copies 25 Cents

Entered as second class matter December 10, 1910, at the postoffice at
Las Cruces, N. M., under the act of March 3, 1879

All communications to this publication must be made to it exclusively. It will be more satisfactory to all concerned if contributions are typewritten.

Secretaries of county societies are earnestly requested to report their meetings, including the subject matter of the papers presented and the substance of the discussions.

Marked copies of local newspapers, or clippings containing matters of interest to the profession will be gratefully acknowledged. The name of the sender should be given.

Books for review should be sent to Managing Editor.

Advertisements of proprietary medicines will be accepted provided the preparations advertised have been approved by the Council on Pharmacy A. M. A., or give the formula in the advertisement. Address all communications to

New Mexico Medical Journal, P. O. Box 23, Las Cruces, N. M.

VOL. VIII

AUGUST, 1912

NO. 5

CONTENTS

Page

Editorial	329
Revised General Program Annual Meeting	338
Roswell, the Metropolis of Eastern New Mexico	340
Some Blood Pressure Observations.....	344
Cesarean Section for Albuminuria.....	348
Book Review	350

New Mexico Medical Society

OFFICERS

President, R. L. Bradley	Roswell
Vice-Presidents {	
L. S. Peters	Silver City
M. F. Desmarais	Las Vegas
J. J. Shuler,	Raton
Secretary, R. E. McBride	Las Cruces
Treasurer, F. E. Tull	Albuquerque
Council {	
S. D. Swopa, Chairman	Deming
E. B. Shaw	Las Vegas
W. T. Joyner	Roswell



New Mexico Cottage Sanatorium Silver City, New Mexico

FOR THE TREATMENT OF TUBERCULOSIS

PHYSICIAN-IN-CHIEF
E. S. BULLOCK, M.D.

MANAGER
WAYNE MACV. WILSON

SUMMER CLIMATE IDEAL

Beautiful situation in the mountains of southern New Mexico. Climatic conditions wonderfully perfect. Cool summers. Moderate winters. A flood

A CORNER OF FOUNDER'S COURT of sunshine at all seasons. Food excellent and abundant. All the milk our patients can consume from our own dairy of selected cows. Moderate charge. Institution partly endowed. Separate cottages for patients. Complete hospital building for febrile cases. Separate amusement pavilions for men and women. Physicians in constant attendance. Livery for use of patients. Well equipped laboratory, treatment rooms, etc. All forms of tuberculosis received. Special attention to laryngeal tuberculosis. Tuberculin administered in suitable cases. One of the largest and best equipped institutions for tuberculosis in America. Patients received only through physicians.

WRITE TO THE MANAGER FOR DESCRIPTIVE BOOKLET.

TEN POTENT REASONS WHY

WE CAN BEST SERVE YOUR BOOKS WANTS

BECAUSE---We carry the most comprehensive stock, new and second-hand, in America and can supply any book published. Our exchange system solves the problem of maintaining your library in latest editions as books no longer needed are dead timber to you--we exchange the salable volumes for your present wants.

Send for our
**CUT-PRICE
LIST**
Just issued--1912 Edition
Offering Exceptional Values

Send titles and dates. Our facilities for obtaining rare books are unexcelled. When you wish to read up on a special subject you can later exchange such books for others

more suited to your constant needs. Circulars sent you frequently on what is new. Our credit policy is generous. By trading with us you have but one account, as we handle books of all publishers, old or new. In fifteen years experience, we have acquired unrivaled facilities for intelligently serving the medical profession. Write us now.

L. S. MATTHEWS & CO., MEDICAL BOOKS

3322 OLIVE STREET.

ST. LOUIS, MISSOURI

The New Mexico Medical Journal

PUBLISHED MONTHLY BY COUNCIL OF THE NEW MEXICO MEDICAL SOCIETY

R. E. McBRIDE, M. D., MANAGING EDITOR

Las Cruces, New Mexico

Annual Subscription \$2.00. For Members, \$1.00.

Single Copies 25 Cents

Entered as second class matter December 10, 1910, at the postoffice at
Las Cruces, N. M., under the act of March 3, 1879

All communications to this publication must be made to it exclusively. It will be more satisfactory to all concerned if contributions are typewritten.

Secretaries of county societies are earnestly requested to report their meetings, including the subject matter of the papers presented and the substance of the discussions.

Marked copies of local newspapers, or clippings containing matters of interest to the profession will be gratefully acknowledged. The name of the sender should be given.

Books for review should be sent to Managing Editor.

Advertisements of proprietary medicines will be accepted provided the preparations advertised have been approved by the Council on Pharmacy A. M. A., or give the formula in the advertisement. Address all communications to

New Mexico Medical Journal, P. O. Box 23, Las Cruces, N. M.

VOL. VIII

SEPTEMBER, 1912

NO. 6

CONTENTS

Page

Editorial.

Program of Thirtieth Annual Meeting.

Significance of Leucocytosis in Surgery.

Cholelithiasis, with Case Reports.

Book Review.

Miscellaneous.

New Mexico Medical Society

OFFICERS

President, R. L. Bradley	Roswell
Vice-Presidents {	
L. S. Peters	Silver City
M. F. Desmarais	Las Vegas
J. J. Shuler,	Raton
Secretary, R. E. McBride	Las Cruces
Treasurer, F. E. Tull	Albuquerque
Council {	
S. D. Swope, Chairman	Deming
E. B. Shaw	Las Vegas
W. T. Joyner	Roswell

New Mexico Cottage Sanatorium Silver City, New Mexico

FOR THE TREATMENT OF TUBERCULOSIS

PHYSICIAN-IN-CHIEF

E. S. BULLOCK, M.D.

MANAGER

WAYNE M^{AC}V. WILSON

SUMMER CLIMATE IDEAL

Beautiful situation in the mountains of southern New Mexico. Climatic conditions wonderfully perfect. Cool summers. Moderate winters. A flood of sunshine at all seasons. Food excellent and abundant.

A CORNER OF FOUNDER'S COURT
All the milk our patients can consume from our own dairy of selected cows. Moderate charge. Institution partly endowed. Separate cottages for patients. Complete hospital building for febrile cases. Separate amusement pavilions for men and women. Physicians in constant attendance. Livery for use of patients. Well equipped laboratory, treatment rooms, etc. All forms of tuberculosis received. Special attention to laryngeal tuberculosis. Tuberculin administered in suitable cases. One of the largest and best equipped institutions for tuberculosis in America. Patients received only through physicians.

WRITE TO THE MANAGER FOR DESCRIPTIVE BOOKLET.

TEN POTENT REASONS WHY

WE CAN BEST SERVE YOUR BOOKS WANTS

BECAUSE---We carry the most comprehensive stock, new and second-hand, in America and can supply any book published. Our exchange system solves the problem of maintaining your library in latest editions as books no longer needed are dead timber to you--we exchange the salable volumes for your present wants.

Send for our

CUT=PRICE LIST

Just issued—1912 Edition
Offering Exceptional Values

Send titles and dates. Our facilities for obtaining rare books are unexcelled. When you wish to read up on a special subject you can later exchange such books for others

more suited to your constant needs. Circulars sent you frequently on what is new. Our credit policy is generous. By trading with us you have but one account, as we handle books of all publishers, old or new. In fifteen years experience, we have acquired unrivaled facilities for intelligently serving the medical profession. Write us now.

L. S. MATTHEWS & CO., MEDICAL BOOKS

3333 OLIVE STREET.

ST. LOUIS, MISSOURI

413176



3 2044 103 097 929

